IMPROVISATION OF LEARNING RESOURCES FOR GARMENT DESIGN AND CONSTRUCTION TRAINING AT KIRA FARM DEVELOPMENT CENTRE WAKISO DISTRICT, UGANDA

BY

NAMIREMBE LYDIA NSUBUGA

19/U/19019 /GMVP/PD

A THESIS SUBMITTED TO THE DIRECTORATE OF RESEARCH AND GRADUATE TRAINING IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTERS DEGREE IN VOCATIONAL PEDAGOGY OF KYAMBOGO UNIVERSITY

AUGUST, 2023

DECLARATION

I, Namirembe Lydia Nsubuga, do hereby declare that this thesis is my original work which has never been presented to any University or Institution of higher learning for any academic award. I also gratefully acknowledge all the authors whose works I have utilized

Signature……. **Date……..**

NAMIREMBE LYDIA NSUBUGA

19/U/GMVP/ 19019/PD

APPROVAL

This thesis entitled ‘’Improvisation of Learning Resources for Garment Design and Construction Training at Kira Farm Development Centre Wakiso District, Uganda’’ has been submitted for an award of the degree of Masters in Vocational Pedagogy.

Signature……..

DR. NABAGGALA JUSTINE

DATE.……

Signature……

DR. MUHOOZI GRACE

DATE: ……

DEDICATION

I dedicate this research work to my family, especially my husband Dr. Kenneth Nyombi. Thank you for the support you gave me during the study, my children Elvis, Ernest, Ephraim, my sister Milly Ndagire and late mother Sarah Nsubuga I really appreciate the support you gave and the words of encouragement. May your soul rest in peace.

ACKNOWLEDGEMENT

I thank God who has empowered me to pursue a Master's degree in Vocational Pedagogy (MVP) at Kyambogo University. I also extend my sincere acknowledgement and thanks to Dr. Muhoozi Grace (supervisor), Dr. Nabaggala Justine (supervisor), Dr. Maureen Muwanga (Supervisor) and Mr Sserwaniko Chris (mentor) who have guided me during this academic journey. May God abundantly reward you.

My sincere thanks also go to Ms. Lilian Tuhaise and Ms. Charity Byarugaba for their guidance. Special thanks go to my colleagues Joan, Angela, Nelson and Collins thank you for the cooperation. More still to the management of Kira Farm Training Centre (KFDC), trainers and the students of garment design and construction thank you for the input in terms of ideas and also participating in the study

TABLE OF CONTENTS

LIST OF ACRONYMS/ ABREVIATIONS

ATL	Active Teaching and Learning
AR	Action Research
DIT	Directorate of Industrial Training
F/W	Future workshop
GDC	Garment Design and Construction
KFDC	Kira farm development centre
L/R	Learning Resources.
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Educational Scientific and Cultural organisation
VE	Vocational Education
VET	Vocational Education and Training
VP	Vocational Pedagogy
AL	Active Learning
VTE	Vocational Technical Education
FDG	Focus Group Discussion

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Learning resources are highly considered as educational inputs of vital importance that aid in the implementing curriculum. The study aimed at improvising learning resources for Garment Design and Construction (GDC) training at Kira Farm Development Centre (KFDC) Wakiso District, Uganda. Creativity among learners was adopted and utilised as an intervention strategy to contribute to the improvement of skills development in garment design and construction training at KFDC. Participatory Action Research design which employed a qualitative approach was used. The population sample of 45 participants including; 30 students, 10 trainers, 5 administrators participated in the study. Data was collected using the following methods; interviews, observation, focus group discussion and future workshop. Constructivist theory by Lev Vygotsky was the underpinning theory that informed this study. The following strategies were identified and implemented by stakeholders as measures of improvising learning resources for Garment Design and Construction Training at Kira Farm Development Centre; online learning was used to search for information, using patch work, quilting and applique, making door mat using off cuts, recycling of old clothes, extraction of natural dyes and off cuts interlaced with fibres to make door mats. Therefore the study made the following recommendations; teachers should be creative and innovative during teaching and learning, group learning should be encouraged among students, students should be creative where resources are not available and hands-on skills should be encouraged among learners.

CHARPTER ONE

1.0 Overview

The study focused on Improvisation of Learning Resources for Garment Design and Construction Training at Kira Farm Development Centre (KFDC). This chapter presents vocational training and vocational pedagogy, background to the study including background of fashion and garment design, statement of motivation, situation analysis, future workshop, statement of the problem, purpose, objectives, justification, significance, scope of study, and definition of terms.

1.1 Vocational Training and Vocational Pedagogy

1.1.1 Vocational Training

Vocational Training is a branch of training that develops practical experience, problem solving, craftsmanship and it builds analytical skills, knowledge and critical thinking needed by students. On the other hand, vocational education provides knowledge and skills needed for people to be self-reliant enabling them create their own jobs for world of work (Lucas et al., 2012). Globally in United States during the 1990s, there was a shift in the education reform due to the economic situation and the focus was on vocational education. Therefore employers needed skilled workforce for restructuring the process and they demanded a new systematic approach of the vocational education.

In the second half of the 19th century, vocational education was first established in private high schools. These offered vocational courses like machine typing, stenography and accounting. It is noted that the aim of these first high schools was to prepare students for business. Africa has made efforts in getting many of the youth to school but there is a social crisis of large numbers of school dropouts. This has led to unemployment and skills shortages in the labour market.

Globally, sustainable development goals (SDG) adopted by leaders of the United Nations member states formulated in 2000 set an agenda for global transformation. One of the most prominent goals was the SDG4 which focuses on ensuring inclusive, equitable and quality education to promote lifelong learning opportunities for all (UNESCO, 2016). The SDG4 had targets to be followed and among them was; (a) girls and boys getting affordable, inclusive and high- quality primary and secondary education by 2030 resulting in relevant and effective learning outcomes. (b) Ensuring women and men have equitable access to cheap and high quality technological, vocational, and post- secondary schooling including universities. (c) Boosting the number of people and adults with necessary skills including technical and vocational skills, for jobs and decent- paying jobs, and entrepreneurship by 2030 (Sain et al., 2022).

Technical Vocational Education and Training (TVET) is referred to as ability and accurate knowledge needed to be skilful in vocational programmes. According to Okumu & Bbaale (2018) TVET is an academic process that entails the study of innovations and expertise, skills, attitudes in various sectors of economic life. Technical Vocational Education and Training prepares people with practical skills and a broad range of knowledge, attitudes and expertise that are recognised for meaningful participation in the world of work. According to BTVET plan, the importance of TVET is to create employable skills and competencies relevant in the labour market instead of educational certificates (MoES, 2011).

Paryono (2017) denotes that advancement of TVET has become the most essential strategy in developed and developing countries as it is perceived as a tool for productivity enhancement leading to economic and social development. TVET in Africa faces challenges which include; having no expertise in hands-on skills that prepares people for the labour market, inadequate infrastructure, equipment and low out puts (Eicker et al., 2017).

Uganda as a developing country promotes skills development through TVET and graduates from the institutions are typically deemed to be ready made for their chosen occupations (Kim, 2021; McGrath et al., 2012). The government of Uganda looks at TVET as one that enables learners to be job makers not seekers and their competences prepare them for the labour market (MoES, 2011). In Uganda's situation by 1925, the government had established only one technical college at Makerere. The government of Uganda strengthened its technical education by building its second technical institution at Masaba (Mt Elgon) in 1930 and named it Elgon Technical School.

1.1.2 Vocational Pedagogy

Lucas et al. (2012) states that for skills training to be appropriate to necessitate students' important aspects of vocational pedagogy, there is need to be updated within the content and approaches. Vocational Pedagogy (VP) is concerned with practices and processes by which knowledge is produced, skills are developed and habits of mind are cultured (Lucas et al., 2012). Vocational Pedagogy is a field of knowledge that focuses on students' learning and it is oriented towards trade, occupation and professions. Mjelde (2013) urges that vocational pedagogy creates an interplay between teaching and learning in schools as well as training at work.

Mjelde (1995, p.125) reveals that vocational pedagogy focuses on learning by doing in relation to trades, occupation, and profession as well emphasising the relationship between the hands , mind and the body that plays a major role in these activities. Vocational pedagogy is concerned with activities of teaching and learning developmental work which is directed towards professional and technical discipline conducted in learning institutions. Within the context of this study, vocational pedagogy helps teachers to improvise learning resources

during the teaching and learning process. Teachers have a responsibility of using alternative resources during instruction of students with an aim of making content more meaningful.

According to Olibie (2013) improvisation is associated with the use of local resources produced either professionally or economically as substitutes. More still in developed countries, teachers use improvised learning resources to equip students with skills. To achieve this, local resources for teaching and learning of vocational subjects need to be available and utilized carefully in vocational institutions (Okori & Jerry, 2017). However, in most vocational training centres there is shortage of learning resources to teach effectively and when available the teachers do not make proper use of them (MoES, 2015; UNEB, 2015).

Availability of learning resources in vocational centres determines the teaching methods by teachers (Musaazi, 1982). Thus in situation where learning resources such as textbooks, laboratory and display materials are lacking, teacher centred methods of delivery tend to dominate (UNESCO, 2016). Consequently the significance of learning resources in different teaching environment cannot be under estimated because for effective learning to occur the teacher should make use of learning resources to improve the teaching and learning process.

1.2 Background to the Study

1.2.1 Garment Design and Construction

Garment design and construction refers to the technical accomplishment of design elements that requires knowledge, skills and basic sewing techniques for example seams, darts, gathers and edge finishing. Clothing is anything worn by human beings to cover and beautify their body (Esmail et al., 2018) . A garment comes from a fabric which is made out of either silk, cotton, wool, nylon, rayon etc. Garments are used as clothing worn to cover the

body and it acts as a barrier between the skin and the external environment. Wearing clothes is a basic need for all humans and a feature of most human societies (Joana et al., 2015). The different reasons why people wear clothes include; protection against harsh environment, identification for example uniforms, modesty (decency) this varies from one culture to another depending on circumstances, for celebration or function like wedding gown, ''Gomes'' for women and ''Kanzu'' for men.

Animal hides were one of the first garments worn by humans for example it is urged that Neanderthals relied on animal hides as clothing (Das, 2022). However woven plant materials were discovered and used in clothing production. Early humans also made clothes from plant fibres especially those of flax and cotton. Cotton was first cultivated as early as 3500 BC in Pakistan. The major transition occurred with the invention of woven fabric. 23,000 years ago, Archaeologists suggest that humans were weaving plants together into baskets and garments and since then technology associated with fabric reduction has rapidly diversified and advanced. During the industrial revolution, weaving became mechanised which allowed the quick production of inexpensive cloth. In the 19th century, artificial fibres like silk and rayon made their way (Sanders et al., 2021).

1.2.2 Improvisation of learning resources for Garment Design and Construction Training

Teaching GDC requires the use of learning resources to help learners relate theory and practice thus making learning meaningful. Learning resources include all the tools that the teachers can use to make the learning more interesting and memorable. These learning resources are widely accepted as educational inputs of vital importance in the successful implementation of any curriculum and proper use of them leads to skills development.

According to Owoko (2009) resources are described as teaching approaches, materials, time available for instruction, competence of teachers acquired through training and experience. Adequacy and relevance of learning resources in classroom can influence quality of teaching which can have positive effect on students' learning and academic performance (Farombi, 1998). The availability of learning resources improves the effectiveness of schools as they are the basic resources that bring about good academic performance in the students (Stephen et al., 2013). When learning resources are not available, education is compromised and this is reflected in low academic achievement (Smith & Sutherland, 2006; Padmanabhan, 2001).

Adequacy of teaching/ learning resources refer to adequate quality and quantities of material resources. Wang (2012) asserts that adequacy of learning resources for instance text books is the major learning resource and cost effective input that fosters learners' achievement. For successful training, text books and instructional materials are the essential tools, their deficiency makes trainers put more emphasis on theoretical subjects other than practical.

1.2.3 Institutional Background

Kira Farm Development Centre (KFDC) is a non- formal training centre which aims at training the under privileged youth in vocational skills. It is supported by Amigos Worldwide (NGO) which provides funds so that the marginalised youth get skills required for the world of work. KFDC is church based and enrolment is done through the church leaders and the total enrolment is 50 trainees every year. Courses at KFDC are assessed by the Directorate of Industrial Training (DIT). Just like any other vocational training institution, the need to improve the training processes is urgent.

1.3 Statement of Motivation

As an experienced skills trainer in garment design and construction and with a major role of providing hands-on skills to learners preparing them for the labour market; the researcher faced several challenges, among them was limited or shortage of resources. Considering the objectives and concerns of the department, the researcher's interest was to improvise learning resources for garment design and construction training.

Furthermore, it was realised that many vocational training centres have a challenge of lack of learning resources which results into teacher- centred learning hence focusing more on what to teach than how to teach (Burgh, 2014). As a result graduates fail to attain competences required for the labour market. Therefore, enrolling for Master's in Vocational Pedagogy Programme enabled the researcher to improve skills, knowledge and competences for teaching and learning of GDC with emphasis on hands-on training and participatory action research. This experience motivated the researcher to conduct research together with stakeholders at KFDC on how to enhance learners' creativity through the generation of resources.

1.4 Situation Analysis

Situation analysis was conducted together with the stakeholders at KFDC to establish the challenges facing the teaching and learning process of GDC subject. The discussion revealed that there are various challenges faced in teaching and learning at KFDC. Focus group discussions and interviews were used as methods of data collections. The main stakeholders in this discussion were KFDC students together with trainers and administrators to help generate information during the situation analysis. Challenges concerning teaching and learning at KFDC were highlighted and these included; Lack or shortage of learning resources, Shortage of skilled trainers, limited time allocated for practical lessons, lack of

motivation, language barrier, slow learners, illiteracy, government policy through taxation on machines, lack of career guidance, lack of exposure or educational visits, low self- esteem etc.

The situation analysis revealed that learners graduate without adequate competences in hands-on activities but also, this impacts on the teacher because the ratio of learners to materials is inappropriate. The administrators mentioned that lack of learning resources was due to insufficient funds to buy learning resources which would aid the teaching and learning of GDC. They further explained that the donations in form of fabric for practicing during the lessons from the UK had reduced. Therefore the information obtained from the interviews and focus group discussions during the situation analysis, were subjected to future workshop in which suggestions of possible intervention measures were generated.

1.5 Future Workshop

Future workshop is known to be a participatory Action research method. The major role of the future workshop is to address the area of concern to more in-depth inquiry to establish challenges and determine appropriate interventions for improvement (Jungk & Mullert, 1987). The researcher used the future work shop tool to generate information from stake holders about the challenges in the garment design and construction department. A future work shop was held with stake holders who included; students, trainers and administrators and it consisted of five phases namely; preparation, critique, fantasy, reality and implementation phase (appendix 7).

In the context of this study, the Future Workshop (FW) was planned and scheduled for 25th/02/2022 from 11:00am-1:00pm at KFDC in the GDC department.

1.5.1 The Preparation Phase

The researcher introduced a letter to KFDC seeking permission to conduct a workshop (appendix 1). The participants were invited for the workshop and provided a conducive environment for FW to take place. Stake holders were informed on what they were expected to do as well as setting rules to be followed during the work shop. This phase further provided information to stakeholders on what and how the FW should be conducted. Time was scheduled for various phases to take place then facilitator and stakeholders' role was clearly defined. The room was organised and tools like recorders, phones, papers, pens were provided.

Figure 1: Conducting future work shop with stakeholders to identify gaps in GDC department

Source: Primary data photo by researcher May, 2022

1.5.2 The Critique Phase

Stakeholders' views were obtained by brain storming. The views were attained, discussed and the challenges affecting the garment design and construction were concretized.

Table 1: Stakeholders identified challenges affecting the GDC department

• Shortage of learning resources e.g. tools, equipment and materials	• **Lack of exposure visits**
• Lack of motivation for students	• Change in technology e.g. manual machines and electrical
• The is no time for slow learners	Lack of capital to start business after graduation
• Language barrier/ communication gap	• Negative attitude from students
• Differences in the level of understanding	• Limited creativity, innovativeness by both students and trainers
• Some learners are illiterate	
• Government policy through taxation on tools, equipment and materials	
• Limited time allocated for practical sessions	

1.5.3 Fantasy/ Utopian Phase

This phase also known as utopia, stake holders imagined an exaggerated picture of the future possibilities of the challenges discovered in the critique phase. The challenges were collected then put in an "idea store", regardless of their practicability. Stakeholders imagined that every situation was possible and resources were available to address the gaps in this utopia phase of the FW. The suggested solutions to the challenges included; more time for practical lessons, students to be good time managers, more trainers, resources to be made available, tools and equipment, pre- planning in order to minimise time and utilizing free time, learners be given chance for education trips.

Figure 2: Stakeholders grouping challenges

Source: Primary data may, 2022

1.5.4 The Reality Phase

The challenges were grouped into long, medium and short term in order to get the most functional. Due to the limited time frame and resources available for carrying out this action research, together with the stake holders, we opted for short term challenges since they needed a shorter time to be addressed. They were further subjected and clustered into three concerns: Lack of motivation of learners, inadequate learning resources and more time for slow learners.

Table 2: Grouping of the challenges

Long Term	Medium Term	Short Term	Most Functional Challenge
• Government policy through taxation on tools and equipment and material	• Language barrier/ Communication gap • Exposure visits.	• Lack of motivation for students.	• Inadequate availability of teaching/ learning resources.
• Negative attitude towards the GDC subject	• Difference in the level of understanding	• Inadequate resources, tools and equipment.	
	• Illiteracy	• No time for slow learners	
	• Limited time allocated for practical lessons		
	• Lack of capital to start business after graduation.		

In order to establish the most constraining challenge, ranking of the short-term challenges was done using a pair wise matrix. Bucher et al.(1997) denotes that with pairwise ranking, each challenge was compared with all the challenges in pairs to see whether each challenge would be overcome in terms of collecting available resources. After the comparison of challenges, using a pairwise matrix the one with the highest score was ranked the first and was established as the most constraining challenge. Inadequate availability of resources was ranked the highest and stakeholders agreed that it was the most functional challenge affecting the teaching and learning of garment design and construction course at KFDC.

Table 3: Pair wise matrix

PROBLEM	A	B	C	SCORE	RANKING
A		**B2**	**C1**	**1**	**2nd**
B	**B2**		**B2**	8	**1st**
C	**A1**	**B2**		**1**	**2nd**

A=1 B= 8 C=1

KEY

A. No time for slow learners

B. **Inadequate availability of learning resources.**

C. Lack of motivation of learners

1.6 Statement of Problem

Schools and institutions which are well equipped with relevant educational facilities like learning resources such as text books, libraries, learning materials and laboratories do much better in examinations than those which did not have resources (Najumba, 2013; Mupa & Isaac, 2010). Teaching and learning resources determine the education systems efficiency and their absence makes teachers handle subjects in an abstract manner portraying it dry and non-exciting (Rachel et al., 2015). In addition, shortage of learning resources is one of the major barriers in implementing inclusive education in pre-school centres. A case in Uganda, many vocational institutions experience shortage of learning resources to help them teach effectively and where they are available, teachers do not make proper use of them (Paul &

Juliet, 2018). Garment Design and Construction (GDC) is a vocational programme leading to acquisition and development of skills, during the course of study, the learner is supposed to acquire key competences in assembling, drafting, measuring, cutting, stitching, storage, packaging and marketing the products. In order to achieve these competences, availability and accessibility of learning resources is very vital. As already observed, in many TVET institutions (both government and private) there is inadequate availability of learning resources. Similarly at KFDC, and as observed in the future workshop, learning resources are inadequate. Therefore, there is a need to revise the pedagogical approaches to ensure that more practical training is embedded in students teaching/ learning process. This research study was designed to solve the problem through creativity in improvisation of learning resources for GDC training.

1.7 Purpose of the study

The purpose of the study was to improvise learning resources for Garment Design and Construction Training at Kira Farm Development Centre Wakiso District; Uganda.

1.8 Objectives and Research Questions

1.8.1 The Objectives of the Study were:

1. To identify strategies for improvisation of learning resources for garment design and construction training at Kira Farm Development Centre.

2. To implement strategies for improvisation of learning resources for garment design and construction training at Kira Farm Development Centre.

3. To evaluate the strategies for improvisation of learning resources for garment design and construction training at Kira Farm Development Centre.

1.8.2 Research Questions

1. What strategies can be improvised for provision of learning resources for Garment Design and Construction training at Kira Farm Development Centre?

2. How do we implement the improvised strategies for garment design and construction training at KFDC?

3. How has the implementation of the improvised strategies improved garment design and construction training at Kira Farm Development Centre?

1.9 Justification of the study

Students are cardinal stakeholders of vocational institutions. When the output in terms of their competencies does not measure up to the expectation of their potential employers, it creates questions about the quality of their training. Garment Design and Construction is a practical based course which should equip students with practical competencies needed in the relevant places of work. Learner's creativity should be improved by generating learning resources for training GDC at KFDC. This study explored generation of learning resources as a strategy of improving learning GDC at KFDC. Therefore, since pedagogical trends are changing models and tools have to be developed to help improve on the pedagogical approaches (Lucas, 2014).

1.10 Significance of the study

This study improved Garment Design and Construction training through improvisation as an intervention strategy of obtaining, accessing and using learning resources. This greatly contributed to the growth of the researchers' teaching skills, shift the mind set of students and administrators, use of alternative materials and resources to improve the training process. Furthermore, the research findings will enable trainers to discover

explanations for their own questions concerning the best way to improve the training through improvisation of learning resources.

1.11 Scope of the study

This includes geographical, time and content scope.

1.11.1 Geographical scope

This study was carried out at Kira Farm Development Centre (KFDC) 21km from Kampala, Gayaza-Zirobwe road in Wakiso district. It is block 167, plot 397 Mutuba 1 and its google coordinate is 0.4881422616031943, 32.61631788653117. The centre is located 5.3km from Gayaza round-about, off Busiika road and 2km off the main road to the farm.

1.11.2 Content scope

The content scope was Improvisation of learning resources for garment design and construction training at Kira Farm Development centre (KFDC).

1.11.3 Time scope

The research was conducted from April to August 2022. During this period implementation of action points and evaluation of work processes was done.

1.12 DEFINITION OF OPERATIONAL TERMS

Creativity: This refers to the ability to bring into existence something new for example knowledge and ideas.

Future Workshop: This is a method that enables a group of people to develop new ideas or solutions when working for instance with social problem (Jungk & Mullert, 1987).

Garment construction: Refers to a skill of designing that requires competence of basic sewing approaches and application of stitches, seams, darts, gathers, pleats and edge finishing (Lucas, 2014).

Instructional material: These are materials designed to enrich the teaching and learning processes that contribute to better learning (Awolaju, 2016)

Learning: This is the acquisition of knowledge or skills through study.

Learning resources: These are tools that class room teachers use to help learn thoroughly.

Pedagogy: This is an approach for teaching in which educators teach theory as well as practice and it relates to traditions and techniques of learning.

Situation Analysis: This refers to the process that helps to identify opportunities and challenges of both the internal and external in an organisation, service and product

Skill: This is the ability to do something well.

Teaching: This is a systematic activity of engagement with learners to enable their understanding and application of knowledge, concepts and process

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

Improvisation of learning resources assists teachers economically and allows students interaction using their intellectual ability during teaching and learning process. In this chapter I explain the social constructivist theory of learning by Vygotsky (1978). This theory puts emphasis on learners' creative engagement during studying and it states that learners build understanding by evaluating new experiences in light of prior knowledge. Consequently, I present the concepts with in constructivist theory in line with how improvisation of learning resources contributes the improvement of garment design and construction training.

2.1 Constructivist Theory

Constructivism theory by Vygotsky (1978) is a learning theory that states that learner's construct new meaning and understanding by integrating new information with prior knowledge. Adesanya (2009) upholds that students actively construct new knowledge as they connect with other environments. According to Siegel (2004), students learn how to construct new meaning through assimilating prior knowledge and new knowledge to gain a new understanding. This theory is a very important approach in teaching and learning since it helps students explore and find answers for themselves as well as having a sense of ownership of their learning. It also enables students take the skills they have learned from the classroom into the real world. Gray (1997) affirms that constructivist teaching approach focuses on the learning that exist through learners' active involvement in construction of meaning and knowledge. This method of pedagogy boost learners' motivation, critical thinking and encourages them to work autonomously.

Furthermore, constructivist approach helps students exchange ideas and promote social and communicative skills as they learn to negotiate, organize ideas and listen to one another. However, despite of all the benefits of the theory, there are some scholars who criticize it. Gupta (2011) asserts that assertive children often control interactions within the classroom and 'average or shy' children may be left behind. More still, the theory lacks structure as constructivist learning focuses on the student- centered method. This leads students to struggle during lessons and may require more structured and organized environment to thrive. Within the context of this study, the researcher strongly agrees with Vygotsky's theory that focus on learners' creative engagement during study since it encouraged student- centered learning as well as collaborative learning which promotes critical thinking among students.

2.1.2 Social Constructivist Theory

Social constructivism is a collective form of learning based on interaction, discussion and knowledge sharing among students. Constructivist learning approach encourages collaboration among learners, the teacher and other components of the teaching learning process. Vygotsky, (1978) asserts that cognitive growth exists first on social level, and then it transpire within the individual which allows learners to relate themselves to circumstances. This is in line with Dewey who explained that "education is not an affair of telling and being told, but an active and constructive process" (John, 2006).

Similarly Roth (2000) attest that the roots of individual's knowledge are found in their interactions with their surroundings and other people before their knowledge is internalised. Kim (2001) points out that social constructivism is based on specific assumptions about reality, knowledge and learning. According to Mathews, (1998) social and educational constructivism involve approaches of learning that have influence on

teaching and educational programme since they are important in incorporating educational strategies.

Constructivist theory explains that the reality is constructed through human activity, and knowledge is socially and culturally constructed as a human product (Ernest, 1999). More still learning is described as a social process which does not take place only with in an individual but passively developed by external forces (McMahon, 1997). The theory stresses that explicit learning occur when individuals participate in social activities such as interaction and collaboration. Constructivism being an academic approach stipulate that instructors should promote students' skills by allowing them do hands on practice (Mvududu & Burges, 2012).

Constructivist pedagogy illustrate learning and knowledge by making students contain the fact that they explore and construct by themselves than they are told by the teacher. Furthermore constructionism puts emphasis on learners' active engagement during studying and it acknowledges that learners builds understanding by evaluating new experiences in the light of prior knowledge. The two important principles used in constructivism include; (a) learners' construct new understanding by using acquired knowledge meaning that their previous knowledge influence their new skills. (b) The second principle indicate that learning is not submissive but rather an effective process in which students adjust their perception in light of what they encounter.

Additionally social constructivism gives learners opportunity to make and apply decisions on their own in different stages of learning process enabling them to use their mental skills through cognitive constructivism and social constructivism. Cognitive constructivism involves restructuring and reorganising of experiences where knowledge

cannot be transmitted to students but be acquired through students' experience and discovery (Qigui, 2017).

On the other hand, social constructivism learning is an action of interacting and collaborating between students or between a teacher and learners (Sharma, 2015). Social constructivism encourages students to learn through personal experiences along with others and suitable learning materials encourages student-centred learning. This is best described in the constructivist 5E learning model that makes learners active in education process. The 5E model is based on the constructivist theory of learning which suggests that people construct knowledge and meaning from their experiences. This model is a planning tool that enables students connect previous ideas and experiences with new context of learning. This model consists of five stages which include; engage, explore, explain, elaborate and evaluate (Duran, 2004). This is as illustrated below;

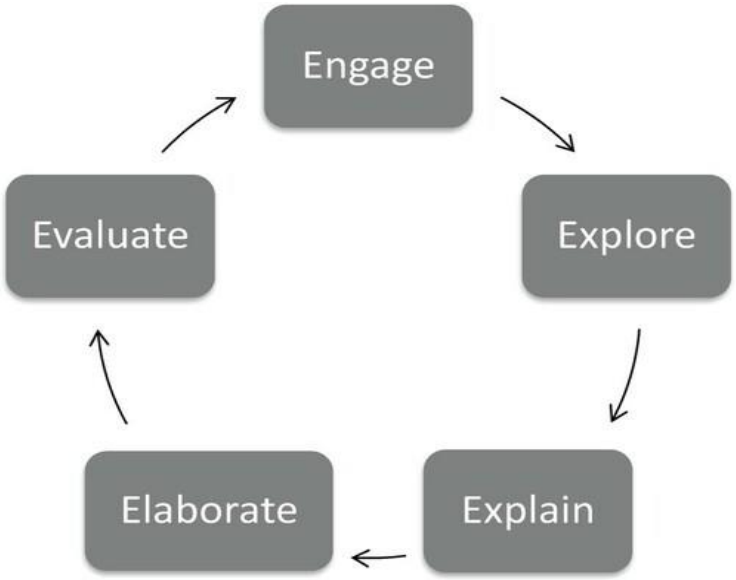


Figure 3: The 5E Constructivist Instructional Learning Model

Source: Bybee, 2009

In **engagement stage** of the learning model, students need to use their knowledge and personal experiences to understand new concepts, design and perform inquiry processes,

working collaboratively with peers and apply concepts learned in various perspectives (Rodriguez & Shelly, 2019). Further in the **exploring stage**, students explore new information by doing research on the new concepts generated in the first stage (Act & Ndon, 2007).

In addition to that the **explanation stage**, based on the information obtained from exploration stage, students collaboratively discuss and create new concepts, as they watch videos and use computers to boost their understanding (Unal, 2017). The **elaborate stage** allows students to apply what they have learned to help them develop deeper understanding of concepts. The stage involves methods and techniques like; questioning, examination, project and problem solving.

Finally, **evaluation stage** gives learners opportunity to assess themselves. Students conduct presentations showcasing their finished products. Teachers in this stage are provided with information on how to assess students' development towards the lesson objectives (Bybee et al., 2006). 5E learning model illustrates how students approach problems based on what they have learned. This model further contributes to motivation of students and covers various activities in which they control the learning process themselves (Rodriguez & Shelly, 2019).

Social constructivism assists in the establishment of opportunities for learners to collaborate with the pedagogue in accomplishing knowledge and understanding. According to Kapur, (2018), commented that social construction takes place in various ways and at different levels. He asserts that it is achieved through group discussion, teamwork and instructional interaction in training institution, social media forum, religious and market places. Kapur, (2018) further remarked that as students interact with people, the material and

immaterial environment, they gain understanding and gather experience that is needed to live successful and practical life.

Collaborative learning is the other term used to describe social constructivism since it focuses on interaction, discussion and sharing among students. This teaching approach permits group work and interactive methods during teaching and learning for example; class discussions, small group discussions or students working in pairs on a given tasks and assignments. The theory puts emphasis on learners collaborative engagement (group learning), sharing ideas, brainstorming trying to discover cause and effect, answers to problem or adding something new to old existing knowledge.

2.1.3 Implication of Social Constructivism to Teaching and Learning

Teaching methods and strategies are very important guidelines that are used during lesson delivery. Dorgu, (2015) describe teaching methods as approaches that enable instructors deliver content to learners based on the set instructional objectives in order to upgrade students' learning. According to Westwood,(2004) teaching methods contain principles and methods used by instructors to permit students learning.

Social constructivism upholds that knowledge develops as a result of social interaction and it is not individual possession but shared experience. Kelly (2012) suggests that social constructivism should be applied in the class room using instructional methods like; group work, guided discovery learning, problem based learning, research projects and brainstorming. Social constructivist learning is grouped into two groups namely; discussion and activity or group work. The discussion teaching method, according to Omwirhiren (2015) is a method that utilizes guided interaction to highlight a particular subject matter with the aim of facilitating students. This method enhances learning by giving students room to

develop their communication skills and mental skills such as critical thinking and reflective thinking (Jegede, 2010).

In constructivism a teacher acts as a facilitator who guides students through informed discussions. Watson (2001) denotes that constructivism should allow students to work in groups, discussions and dialogue between teachers and amongst students should be encouraged. More still teachers should make use of constructivist principles to help learners become resourceful, innovative and allow time for learners to build relationships.

Teachers' major responsibility is to facilitate learning by supporting, guiding and monitoring the learning process. Learners' confidence is built when an instructor guides in addressing problems and expanding their understanding. This teaching approach has a fundamental change from traditional teaching and learning method which is lecture based to practical based instruction. An example of group work is problem based learning method which is an innovative approach to learning that teaches a multitude of strategies critical for success in the twenty-first century (Bell, 2010)**.**

2.1.4 Implementing strategies of improvisation of learning resources basing on social constructivist theory.

In the 21st century skills acquisition is given priority (UNESCO, Sub-Education Policy Review report (TVET), 2014), incorporating creativity in learning through improvisation of learning resources promotes critical thinking, self-awareness, hands-on learning and practice making the content relevant, interesting and easier for students to understand. Improvisation of resources in training enables students improve on their thinking, encourage group work thus, makes teaching student-centred (McCarthy, 2015).

Teaching consists the use of resources in a creative way which necessitates a shift in how students are taught (Biasutti, 2017). Improvisation of learning resources opens new

perspectives regarding teaching and learning based on creativity development and interactive knowledge construction. According to (UNICEF, 2017) group learning is believed to be a driving force of creativity in regard to problem solving and generation of knowledge. Learning resources are designed to suit the content, mode of delivery and evaluation of processes involved in order to suit a desired feedback during teaching and learning.

Sociocultural development theory by Vygotsky (1978) asserts that socialisation plays a significant role in the development of cognition. Vygotsky explains that learners explore by discovering the things they come across through interactions. In scaffolding method of instruction, Vygotsky's socio-cultural theory and zone of proximal development (ZPD) explains the distance between what students can do and the learning in which they can be helped to achieve competent assistance (Majid, 2017).

Socio- cultural theory further emphasises the way students learn through collaboration and their ability to communicate in groups to acquire the cultural values in the society (Huang, 2021). Students get to know how to use technology and equipment through social interaction which helps them be knowledgeable in the area of study. The teacher's in scaffolding method of learning is to support students as they learn and develop new skills. This helps teachers to demonstrate how to solve problems and the method also provides individual help based on students ZPD ((Jungk & Mullert, 1987).

Hartman (2002) asserts that in the ZPD asserts that as learners' knowledge and competence increases, the trainer deliberately reduces the support he has been providing them. The scaffolding method enables students to build on prior knowledge and internalize new information which promotes creativity by generating resources among them. For example guiding learners on how they can use new knowledge independently. According to

Vgostky (1978) the role of teachers is to support learners' development and provide support that will help them get to the next level.

Vygotsky (1978) further explains that scaffolding theory focuses on students' ability to learn through the help of experts and that when it is used effectively, it helps students get knowledge on the content they wouldn't have been able to process on their own. Constructivist theory believes that learning is concerned with ideas taught as well as students' expectations and mind-set. (Driscolle, P.M, 2000) asserts that knowledge can only exist with human mind and learners creatively derive the real world from their perceptions. The students are able to develop their skills through hands-on instruction, cooperative learning and they acquired concepts of active learning. Engaged learning is a product of motivation and active learning where by motivation consists of addressing boredom, anxiousness and apathy (Becker 2013).

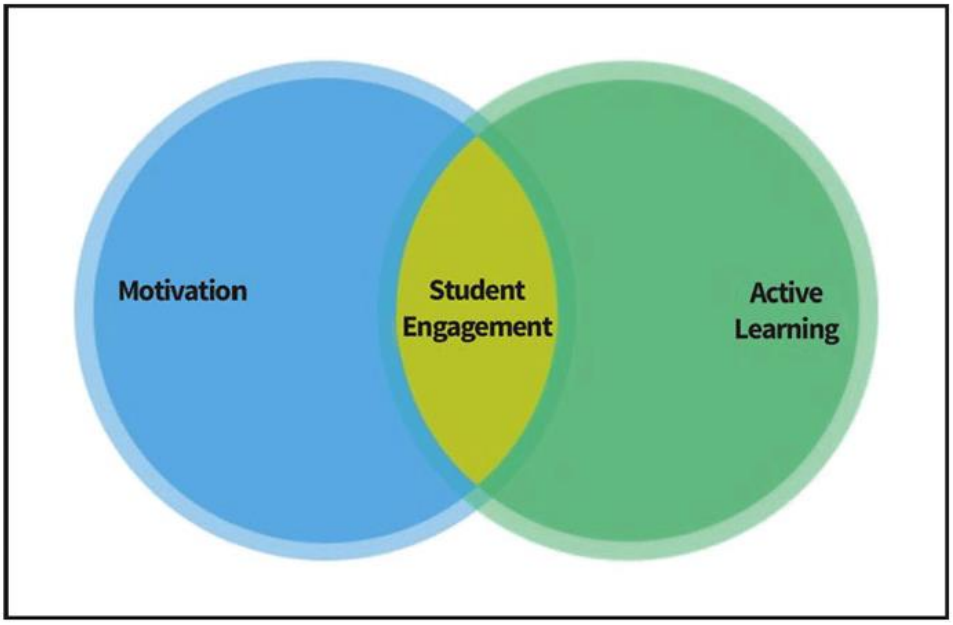


Figure 4: Barkley's model for engaged learning (2010)

Engaged learning cannot exist unless both motivation and active learning are present. In the stakeholders meeting during the future work shop, motivation and lack of hands-on activities were identified as challenges for teaching/learning of garment design and

construction therefore these two should be emphasised as solutions for improving on student's engagement in learning. Active learning (AL) happens when students are allowed to create their own ideas, solutions and knowledge is transferred from one to many. It also builds a sense of community accompanied by individual growth. McCarthy (2015) describe a student-centred approach as one in which students take ownership of their learning hence stressing the fact that they build their own understanding and knowledge of the world as the constructivist theory states.

In this study, learners' creativity was enhanced using the following methods; the group work, collaborative learning, active learning, engaged learning, students- centred learning and learning by doing (Kolb et al., 1999). All these types of learning enabled a researcher and learners to improvise resources in the creative way. They worked together to solve major challenge of the study by implementing the strategies identified by the stake holders. Therefore during the implementation, according to Kimball "learning" students are not just passive listeners but they are involved in seeing, doing and understanding as a way of practicing hands-on activities. This is in line with the Asian proverb "I hear and I forget, I see and remember and I do and understand" and it is related to the constructivist theory which emphasizes active learning through practice. The researcher agrees with the proverb since it emphasises learning by doing according to the study.

Kompf (1996) denotes that constructivist teachers permits students responses to drive lessons, shift instruction strategies, and alter content; learners are engaged in collaborative learning. In this collaborative learning class room, the teacher provides a good environment for learners to work together in groups and guides them in solving own problems (Act and Ndon, 2007). Collaborative learning also enables learners perform well and they are motivated during the learning process. This type of learning uses techniques and styles for instance; enabling learners to think, encourages creativity, learners get connected to

technology, they also experience a digital learning environment (EDUCAUSE, 2015). More still, this type of learning provides a thinking space for learners by creating a conducive environment for learning like equipping rooms with audio-video, display systems and walls for display of project work. All these motivates learners to be creative through sharing ideas and improves communication among them.

E-learning is an online platform that utilizes a variety of multimedia technologies. This type of learning provides learners an advantage of rotating classes anywhere any time and uses different learning approaches basing on interactive content available on internet (Songkram, 2015). Furthermore online learning confirms that students' are completely involved as learning takes place together with videos, texts, collaborative sharing, sounds and interactive graphics (Islam, Beer &Slack, 2015). More still, e-learning encourages interaction among students and engages learners during the learning process (Telebian et al., 2014). It also promotes communication and collaborative learning (Sarkar, 2012). Vygotsky (1978) explained that children learn best in the social environment and create meaning using engagement with others. Vygotsky (1978) further narrates that children perform and solve complicated problems with support, direction and collaboration. Therefore students can actively participate in the learning process if classes are managed to support learning using discovery. E-learning offers chance to students to inductively and independently provide conclusions leading to development of intellectual abilities and improve the quality of durability and knowledge.

However there are some barriers that students face while using e- learning which may lead to negative outcomes. According to Arkourful and Abaidool (2015), it might result in being less effective due to absence of face to face encounter with teachers, reduces possibility of restricting legitimate activities like; plagiarism and cheating. Gilbert (2015) commented that many students need to work autonomously to avoid the need to interact with their class

mates. Another challenge is learners that lack self- regulation have a tendency to no assign sufficient time of completing assignments hence poor quality work (Sarkar, 2012).

. Educational trips help to enhance students creativity, they are learn without the help of a teacher and their communication skills are improved for instance, listening, asking questions and sharing knowledge (Marc et al, 2014). Bowen (2014) reports that many studies conducted on the effectiveness of educational trips emphasise their great importance in improving students' learning experience by helping them remember what they learned when they participated in the trip. Mahgoub (2014) narrates that these field excursions expose students to real- life situations and contexts that help them improve on the level of knowledge and understanding of a particular subject.

More still educational trips enables learners to go in different work places and obtain experience they wouldn't have obtained from school due to different circumstances (Myers & Jones, 2009; Shakil et al., 2011). Therefore, field trips should be incorporated in teaching and learning because it gives opportunity to learners to obtain information for themselves and use their senses to touch (Ali et al., 2019). Myers and Jones (2004) adds that educational trips improves students' educational experience since it gives first-hand knowledge and unique learning opportunities on a specific subject. However, Myer and Jones (2004) report that educational trips need to be adequately designed and planned for students to acquire their benefits. Education trips are associated with experiential learning where students' experience first- hand the things they were taught in the classroom, explore, touch, listen and watch (Behrendt & Franklin, 2014).

In constructivism, the teachers' role is to put more emphasis on students learning rather than their performance; learners are encouraged to be responsible and self-governing during the learning process as supported by Gray (1992). Constructivists' approach

recommends teachers to provide complex learning situations related to real life, learning resources like; virtual library, talking library and question bank where multiple solutions are possible for example in science teaching, the emphasis is on discovery learning by providing appropriate feedback and guidance as learners construct interpretations of various phenomena.

Creativity is a process that helps to develop ideas that profits an individual. It helps in relating familiar things with new approaches, examining challenges with a receptive mind, making connections and memorize on new possibilities (Anindo, 2016). It is further defined as a learning habit that requires skill as well as specific understanding of contexts in which creativity is being applied. Innovation involves new ideas, new ways of looking at things, new methods or products that have value. It also involves doing something differently and implementing something new. Creativity and innovation are fundamental to teachers while improving their professional practice and to school development.

Furthermore creativity involves reflection, engagement, and develops confidence as well as responsibility in a person (Awolaju, 2016). Innovation and creativity have broadened and progressed over time. In the 20th century, creativity was associated with arts but it grew to include and other disciplines. In the 21st century, creativity is viewed as a collaborative process of communal sense employed in problem solving. In creativity, learners should generate their own knowledge to help them form their own understanding and imagination of things around them. Creativity and knowledge work hand in hand and to think creatively promotes active learning among learners (Jammie, 2019).

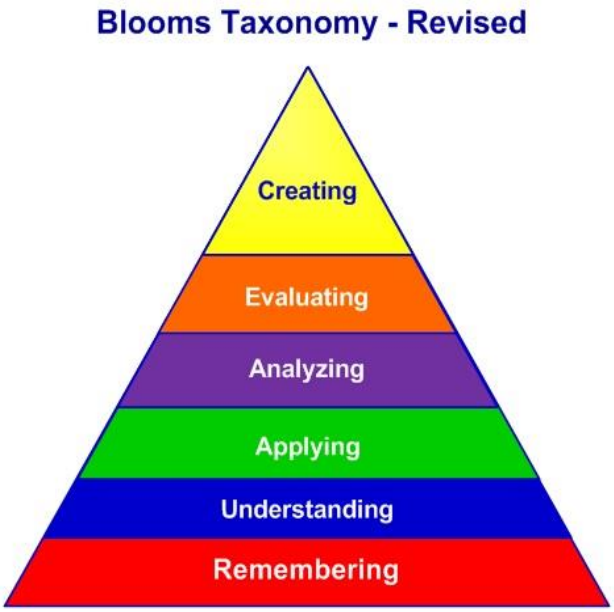


Figure 5: A revised version of Blooms taxonomy.

Source: Vanderbilt University centre for teaching, 2010

This study was guided by Blooms taxonomy (figure 5) which provides a learning that enables students move from a lower order thinking to a higher order thinking. Students through getting involved in different activities, enables them build one another by actively participating together in group learning. To explain the above model, Blooms taxonomy has six levels which include:

Remembering; in this level, the teacher's is to encourage learners to do note taking, observation and memorizing information using their brain. During learning, remembering is done when students relate previous knowledge with new knowledge.

Understanding: learners are encouraged by their teacher to categorize, describe and reveal things as a way of making them understand the content of the study. Through these, students are able to put the information together and the get a meaning out of it.

Applying: while applying, the teacher demonstrates and learners put in practice what has been demonstrated, they anticipate and present the information through illustrations.

Analysing: this is done through experiments by both the teacher and the learners then they are allowed to work on their own by demonstrating what they have learned as a way of evaluation.

Evaluating: the teacher assesses the learners through certifying, verifying and reinforcing information that is being learned.

Creation: creation is done by the teacher through constructing information, and planning what is to be learned.

According to Vygotsky's zone of proximal development (ZPD), creative learning activities enables a teacher to use scaffolding method to enable students be guided while demonstrating their creative habits and skills. Since all humans are born with creative instincts, this signifies that all people have a creative potential for instance; young children use imagination during play to try out situations and possibilities like imagining that a cardboard box is a car and grass is food. This makes them creative even when they go through the school process, they will be memorizing what was previously done and try to build new information of making real things rather than imaginations.

Teachers should encourage learners' creativity by promoting learning rather than performance and also create a conducive environment for creativity to take place. Therefore, schools should stimulate creative learning by;

- Providing opportunities for pupils to explore, concentrate for extended period of time, reflect, discuss and review.
- Should include creative activities in the co- curricular programmes.
- Balance curriculum so that students experience a range of subjects, activities and have time for creativity.

Creativity is regarded as one of the critical skills of the 21st century learners (Craft, 2006). Researchers have explored approaches that provide creative educational experiences inside and outside the classroom (Looney, 2021). According to Amabile (2012) creativity involves acts that people do in their everyday lives and that the level of creativity a person has is based on the different acts of creativity in that same person. The components of Amabiles componential model include; expertise, creative thinking and task motivation as shown in figure 6.

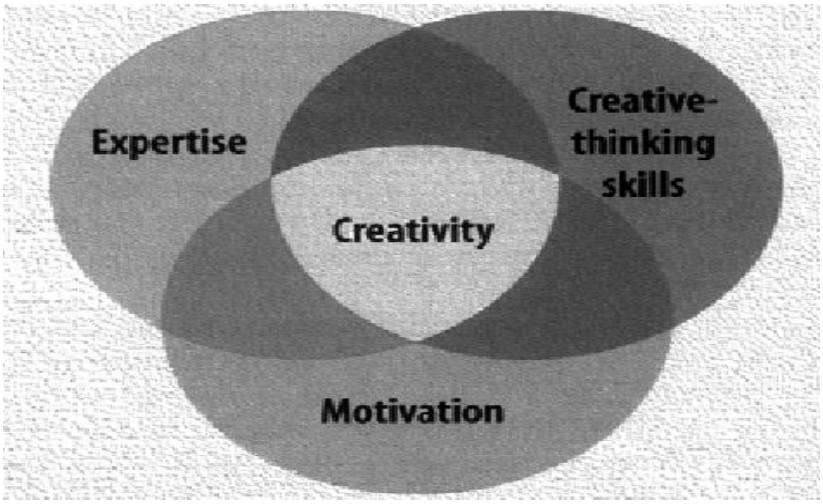


Figure 6: Components of creative Amabile's 1998

In this model, expertise impacts on the technical knowledge which deals with creative thinking skills, flexibility and imaginative way of how people approach problems and find solutions, Motivation encourages learners' interests in the course. Therefore, creative thinking skills, expertise and motivation should be employed in teaching and learning in order to enhance learners' creativity.

This componential model impacts on education in the following ways; the teacher has to use different teaching strategies to engage students during the lessons, which should promote students' creative thinking process (use of the mind) through brainstorming, working independently and openness. They should provide a good learning environment for sketching

using sketch boards, drafting, drawing diagrams for illustration, stitching, creative writing and problem solving skills through which the students build and acquire skills by themselves.

The model encourages motivation among students for instance when students are not motivated, they do not perform as expected and may not be encouraged to work in groups. Therefore teachers should use different methods to motivate students and should help them develop their relevant skills and creative thinking abilities which enables them learn and grow creatively. The teacher should frequently assign class work involving creativity so as to observe higher order cognitive skills, problem solving, critical thinking, and making connections between subjects.

2.2.3 Improving the use of learning resources.

Learning resources are used during teaching and learning process to help in the achievement of learning objective (Riser & Dempsey, 2007). Teaching and learning methods cannot be effective if learning resources are not planned and prepared for instruction. According to Eliana (2017) the use of learning resources depends on the pedagogical approaches a teacher applies since he is the knowledgeable. Porter et al. (2011) explains that learning resources are designed to provide realistic imagery and substitute experiences in order to enrich curricular experiences of many kinds. To improve the use of learning resources, group learning method has become an important focus in this time of pedagogical change (Burke, 2011). This is supported by UNICEF (2017) which supports group learning to be a driving force of creativity in regard to problem solving. Therefore, learners' creativity necessitates a shift in how students are taught.

Chapter Summary:

Enhancing learners' creativity through improvising learning resources is of great importance in the field of education since it helps teachers and students' be creative and innovative during the process of teaching and learning. Many vocational training centres have the challenge of shortage of learning resources which has led to teacher-centred learning i.e. focusing more on theory than practical. This is why the researcher based the study on constructivist theory which emphasises creativity through improvisation of learning resources to encourage student-centred, engaged, collaborative learning and group work among students. All these promote students' critical thinking and help them build understanding by evaluating new experiences in light of prior knowledge. It also helps students to explore by doing research on the new concepts as well as applying what they have learned to help them develop deeper understanding of the concepts. Therefore constructivist theory by Vygotsky (1978) best suits this study because it puts emphasis on learners' creative engagement during studying.

CHAPTER THREE:

METHODOLOGY

3.0 Overview

This chapter presents information on research methods, procedures used to obtain and analyse data, research design, study population, sample size and technique, data collection methods and tools, quality control methods, data analysis techniques, ethical considerations and limitations. The research followed an action research model which aimed to practically check whether the training processes are ideal for skills acquisition. Action research plays an important part in improving the ability of teachers to solve problems of classroom and introduces them as professionals in the field (Whitehead, 2002).

3.1 Research Design

The study used participatory action research design which employed qualitative method. The purpose of the research was to solve the main challenge through participation of stakeholders (Sennerud, 2003). The information was gathered from the participants at KFDC where the challenge was experienced; and was later presented according to the specific objectives. The researcher had the responsibility of collecting information using methods like interviews, focus group discussions, and observation checklist. The purpose of this was to create a deeper understanding of the problem and the impact of the laid strategies (Creswell, 2009).

Participatory action research was used to explore a problem with an aim of developing solutions. Therefore the study used interviews and observation to represent perceptions of the research participants (Lester, 1999). Observation and interviews were key data collection methods within the context of this study. Together with stakeholders the researcher identified challenges, findings, solutions and implementing strategies. Finally, the

stakeholders were involved in the evaluation process of the research to assess the implemented strategies of improvisation of learning resources for GDC training. The different activities done in the study allowed students- centred learning which helped them learn better (Erika, 2009). This teaching and learning process ascertains that Participatory action research helps practitioners search their own practice to identify problems and seek possible solutions to solve them, monitor and reflect on the process and outcomes of change (Meyer, 2000). The figure below shows the action research cycle by Kemmis & Taggart (1982).

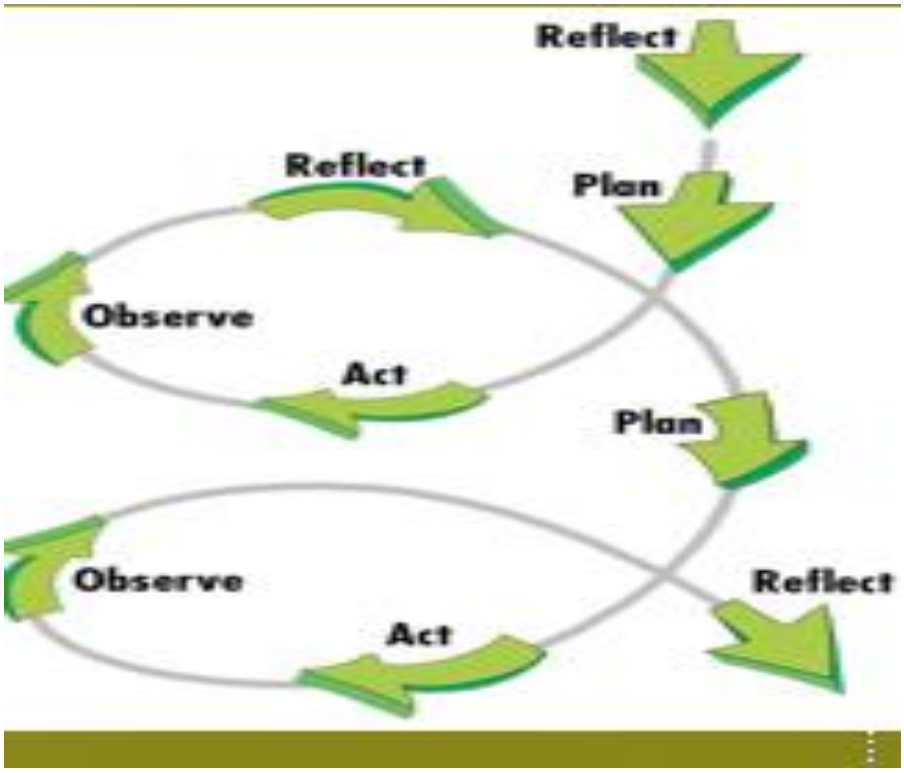


Figure 7: Action research cycle.

Adapted from (Kemmis & Taggart, 1982).

The cycle of action research shown in figure 7 typically comprises of four (4) levels that include: Reflecting, planning, acting and observing as explained below;

Reflection; This level involves looking back on the past events, on what happened, how it happened, taking time to involve and listen to stakeholders for their different perspectives and

developing ideas or ‘theories’ through interpretations of what happened and sharing ideas as a community of practice. This helped stakeholders to develop strategies of what can be redirected and making informed opinions based on the information gathered.

Plan; Planning in the context of this study involved identifying the actions to be tried out and developing actionable strategies in an attempt to improve the situation. The action plan is thus developed through collaborative participation with stakeholders as it is the case for all levels in the cycle. At this point, stakeholders came together to dialogue about what they were to do and how they were to do it so as to enhance learners’ creativity to generate learning resources for GDC at KFDC.

Action; this comprises doing what one said is going to do systematically and creatively implementing the action plans, communicating with others while involving them in the process and keeping track of what happens.

Observation; this requires looking at what is happening, describing and recording what has happened. Good observation requires looking at what is happening and describing it accurately since it provides a comprehensive base for reflection of what took place. The observation level takes into account something that is happening or not happening, using available information, finding out new information and involving a range of stakeholders to describe what they think is happening in an institution. This gives basis for yet another reflection in the cycle. Action research being cyclic in nature ensures that issues are solved following the cycle steps. That is after identifying the problem, planning, acting, observation and reflection on the challenge follows in case the problem is not solved. All this is done in a bid to improve the situation.

3.2 Area of the Study

Kira Farm Development Centre (KFDC) which is located in Gayaza- Ziroobwe road was selected because action research is best done where the researcher works or lives to find out the challenges and possible solutions for addressing them.

3.3 Study Population

The study target population consisted of students, trainers and administrators. The stakeholders were considered appropriate to the study because they have hand first -hand opinions, views and ideas in regard to improving GDC training. All the selected participants were stakeholders/ beneficiaries in one way or another in improvisation of learning resources.

3. 4: Sample size.

The sample consisted of stakeholders in the teaching and learning process who are mainly the students, trainers and administrators of KFDC. The GDC students were selected to avail information on the challenges affecting their training and how they are taught. The population sample was obtained as shown in table 4 below.

Table 4: Population sample of participants involved in the research study

Number	**Category of Respondents**	**Target Population**	**Sample Size**	**Sampling technique**	**Tool**
1	Students	30	30	Purposive	Interview
2	Trainers	10	10	Purposive	Interview
3	Administrators	05	05	Purposive	Interview
Total		**45**	**45**		

3. 5 Sampling Technique

Purposive sampling technique was used to select participants in this study. This helped to identify individuals who would give reliable information and who were

knowledgeable about the problem at hand. The sample included the; students, trainers and administrators. Students were selected to provide information on the challenges facing GDC, trainers were selected because of their knowledge and experience in training and administrators were selected due their experiences in administrative activities.

3.6 Methods of data collection

Data collection methods are techniques used to gather and measure information on targeted variables in an established systematic fashion which enables the researcher to answer the identified questions and evaluate the outcomes.

Table 5: Data Collection Methods and Tools

Data collection methods	**Data collection tools**
Interview	Interview guide, recorders
Focus group discussion (FDG)	Focus group discussion guide Camera, recorders
Observation	Observation checklist
Future workshop	Focus group discussion guide
Videography	Camera , recorder

3.6.1 Interviews

The researcher used interview as a method of data collection to gather information required from participants by asking questions in an interview process. Stakeholders were invited during the evaluation meeting and asked questions about the benefits of the study like in figure 27. Furthermore in depth interviews were used in this study, these refer to personal and unstructured interviews which aim at identifying participants' emotions, feelings, and opinions regarding a particular research subject (Tuner, 2010). Through interviews, the researcher was able to know how teaching and learning was conducted, the challenges facing the garment design and construction training, and their solutions. The researcher also explored ways of improvising and generating learning resources for training garment design and construction.

3.6.2 Focus Group Interview

Focus group discussion was used to find out the challenges affecting garment design and construction training for example inadequate availability of learning resources, less time for practical, language barrier, lack of motivation etc. Furthermore stakeholders were able to identify the strategies for improvisation of learning resources for garment design and construction training during FDG. These included; recycling of the old clothes, extraction of natural dyes, and use of online lessons to find information on patchwork, applique and quilting.

3.6.3 Observation

The information was gathered by observing all the activities and procedures that were carried out during the implementation process (collecting pieces of cloth or off cuts, shaping them, and opening up old garments (Jeans) it was done with the help of an observation checklist by noting the events of the implementation process for improvisation of resources for GDC. The researcher also observed by watching carefully the learners during the working process, their discussions and the ideas generated amongst them. Participatory observation was also employed during the process of working since the researcher allowed students to work on their own during practice to observe if the method employed had an impact on students' learning (Arthur, 2005). This was done as the learners worked out the products, the researcher would ask guiding questions which brought out the skills needed.

3.6.4 Recording devices

Smart phone and camera were used to collect the evidence of the research through taking photographs, voice recordings and videos during field research activities (Alabi, 2013). They were vital during all focus group discussions especially when participants were stressing their views and demonstrating their work. The information obtained with these tools was also used during the documentation this thesis.

3.6.5 Future Workshop

Unlike in the situation analysis where Future Workshop (FW) was used as a problem identification tool, at this stage, it is used as a data collection tool. The FW (appendix 5) was used as a tool in this study because it was aimed at supporting participants in identifying common problems; and developing strategies in order to improve on the situation at KFDC. This FW was developed for groups with limited resources to have a say in collective decision-making process. It was meant to shed light on common challenging situations, to generate visions about the future and to discuss how these visions could be realized. FW is a good tool for tackling complex problems where many, often seemingly contradicting views, have to be fitted together.

FW was developed by Jungk & Müllert in 1987 as an investigative way to highlight problems and look for suggestions to solve them. In light of the above, key participants at GDC department, KFDC developed strategies through voluntary and active participation (Wenger, 2002). This tool was employed because when stakeholders are empowered and directly involved in the process; they are often recognized as being the best players to make suggestions about improvement in their own work environment. Empowering them by counting on their opinions provided them with authority, responsibility and accountability for required decisions. This is in line with Wenger's (2002) assertion that, "Communities of practice involves a group of people informally bound to one another through exposure to a common class of problems, pursuit of solutions and thereby themselves embodying a store of knowledge". Wenger's assertion therefore was central in guiding this study research procedure.

3.7 Procedure of data collection

An introductory letter from MVP administration at Kyambogo University that formally introduced the researcher to Kira Farm Development Centre (KFDC) was obtained. A meeting was held with KFDC administrators to discuss the need to carry out an action research study. Together with stakeholders a date was agreed upon and preparations to carry out future workshop. Future workshop was conducted basing on the situation analysis as a starting point and the most pressing problem and solutions were laid through various stages. The solutions were implemented and their impact was assessed during implementation process through the workshop in which all the participants were involved.

3. 7.1 Data analysis

Data analysis provides a process of inspecting, cleansing, transforming and modelling data with the goal of discovering useful information, suggesting conclusion and supporting decision making (Ader, 2008). Data was collected and analysed according to the objectives.

3.8 Reliability and Validity of instruments

3.8.1 Reliability

Reliability is the consistency of how a method measures something for instance same results can consistently be attained using same methods under the same circumstances. According to Bloor and woods (2006) data accuracy was achieved by asking relevant questions geared towards the objectives of the study and research design using an interview guide on different occasions to the same respondents. This was done to avoid being subjective to participants response which would create a bias. Reliable data was gathered through interviews making sure the same questions were asked twice or thrice in order to get the same answer. The degree to which interviews produced the same results at different intervals of questioning made the findings reliable.

3.8.2 Validity

The validity of the data was based on my involvement in the research processes with participants. To ensure that the data obtained from participants was valid, it was triangulated through comparing what all participants had to say about the similar situation. Furthermore, focus group discussion and interview guide tools were pre- tested with stakeholders to ensure that responses are clearly understood and provide useful information.

3.9 Ethical considerations

The researcher presented an introductory letter from the faculty of Art and Industrial Design in the department of visual communication of Kyambogo University to the respondents so as to avoid bias and give focus of the study (Appendix 2). Permission was sought from the stakeholders in order to conduct an Action Research. This is supported by McNiff &Whitehead (2006) who emphasises the need to get permission in written form to carry out Action Research, when improving practice. The participants were assured of confidentiality for their photographs, experiences and stories as well as any data generated during the research. This assurance helped build trust for the smooth research process. This is in support of Descombe (2005) who asserts that there is need of a degree of trust among the members of a group and the research must remain visible and open to suggestions from others, which was abided with because the participants kept bringing ideas and suggestions which encouraged smooth flow of the research.

3.10 Limitations of the study

Since the study was in school setting, learners were involved in many school programmes. The researcher faced difficulties of incorporating her research time table with school programme since learners were engaged in other activities. This delayed the research processes and evaluation. Therefore the research process would not be completed gust 2022 as scheduled but instead in October the same year.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.0 Introduction

This chapter analyses and presents data that was relevant in improvisation of learning resources for garment designing and construction training at KFDC. The future workshop held on 25th/02/2022 clearly identified challenges experienced in teaching and learning of garment design and construction which included; inadequate availability of learning resources, less time for slow learners and lack of motivation of learners. Among these, inadequate availability of learning resources was ranked the highest after comparison using the pairwise matrix to determine the most pressing challenge. Therefore presentation of findings will sequentially follow the objectives of the action research study. The major participants during the course of data collection included; students, trainers and administrators of KFDC. The research being qualitative permitted data descriptions based on researcher's reflection, students and administrators responses and observation.

4.1 Exploring strategies for improvisation of learning resources for GDC training at KFDC.

In GDC, learning in groups or collaborative learning helped students to engage in order to achieve their goals. This kind of learning involves interactions and communication with fellow members as earlier observed (Vygotsky, 1978). It includes; collaboration, feedback , discussions which enable learners to work together. The researcher divided learners in groups to encouraged them work together and share ideas. The researcher's work was to guide these students as they were working. Students were assigned tasks in their groups and this helped them interact and communication was easy among them which further helped them improve their learning abilities.

Through working in groups, learners with their varied competences actively participated during the learning processes. This kind of learning enabled students discover and come up with different ideas of producing products such as bed covers, clothes, door mats, bags etc., thus enhancing their levels of creativity. Working in groups enabled students to use the available resources in the environment which encouraged the researcher together with students participate in generating resources themselves which they further used in problem solving and discovering of new ideas.

Generating learning resources enabled the researcher intergrate theory into practice and the knowledge and skills acquired helped to find solutions to the existing problem. Some of the resources generated from the environment included waste materials such as: old clothes, old towels, discarded paper; colour dyes from plants and vegetables like: onion, beat roots, red cabbage and turmeric, banana fibres for making play toys for children. Mats were utilised in framing articles made by the learners. All these were practically made by learners with the guidance of the researcher and it helped them improve on their practical skills through hands-on practice. Group learning enabled them work together and were able to correct each others' mistakes. This is illustrated in figure 8.

4. 2 Implementation of the identified most appropriate strategies was carried out

Several strategies were identified as discussed as below;

(a) Incorporating creativity among learners through improvisation learning resources. This is done by using patchwork, quilting and applique method.

Patch work is the joining up of small pieces using needle work in different designs, colours and textures. Piece. The figure below shows participants in their groups cutting a template to help them cut pieces for patch work using off cuts. .

Figure 8: Participants cutting a template for patch work.

Source: Field data (July, 2022)

Figure 9: Group learning participants cutting patch work pieces by using a template

Photo by the Researcher, KFDC (June, 2022)

Figure 10: Participant showing plain and printed cut out pieces and stitching a lace on the quilted bedcover.

Source: Field data (June, 2022)

Quilting is defined as a method of joining two pieces of fabric with a filling in between to make quilt designs. Two pieces of fabric made of patchwork together with a filling in between was joined together to create a soft designed feel while making a bed cover as shown below.

Figure 11: Participant joining printed patchwork pieces and display of the finished bedcover

Source: Field data (July, 2022)

Participating in any hands-on activity is very important in increasing performance and depth of knowledge among learners. It allows learners to discover and then put in practice what they have discovered as a way of generating resources through critical thinking and collaborative work. Participants from the group that made a bed cover narrated that;

Participant 1: "*Making a bed cover using small pieces and quilting is being creative and it is an easy way of getting money because one can make it even without buying material; this is going to help us create our own jobs when we go back to our communities since it does not need capital to make one."*

This statement confirms that creativity and generation of resources is very important in teaching and learning of GDC since it promotes student- centred learning where learners are able to think and do for themselves without the help of the teacher. This builds confidence in starting their own jobs after graduation.

In group learning there is demonstration of an activity being done. In figure 13, the researcher demonstrates and the learner puts in practice what has been demonstrated while other group members are observing. This improves on students' communication and concentration during the teaching and learning. Demonstration is the act of showing clearly how something works and it shows proof by using examples, concepts and experiments.


Figure 12: Researcher illustrating how to make lining for a tote bag; learners observing and practicing

Source: Field data July 2022

Applique also involves needle work in which pieces of fabric are sewn or stuck on a big piece to form a picture or pattern. In the figure below, the participants display a tote bag with blue green applique pattern designs made out of off cuts.


Figure 13: **Participants happy showing off the already stitched tote bag using patchwork and applique pieces.**

Source: Field data (July, 2022)

Figure 14: Participant displaying a patched skirt with joined up pieces.

Photo by Researcher (July, 2022)

Hands- on practice helps learners to improve on their performance and enables them to build on their knowledge since the 21st century for skills target learning and innovation abilities. During the study while learners were practicing hands-on activities, communication was very vital among them followed by collaboration, creativity and critical thinking. Patch work method can also be used in making garments. This is illustrated in fig. 14. The learner was able to join small pieces with the aim of making a girl's skirt.

Participant 2: *"It is so amazing to see a well stitched skirt made out of patch work pieces. I am going to begin making clothes for my girl child no more spending money on buying clothes."*

Furthermore, these learners went ahead to discover that small pieces can make a very nice door mat. By working in groups and in a creative way participants cut small pieces which they used to make a door mat as illustrated in figure 16.

Figure 15: Group learning to execute a task of making a door mat using tinny pieces of fabric.

Photo by Researcher (June, 2022)

Figure 16: Researcher together with participants display a doormat made out of wool

Source: Field data (June, 2022)

The study employed creativity in generating learning resources and learner-centred approach. This type of learning refers to interactive strategies that help students to get involved in different activities which enables them build on their abilities. This is clearly seen in group learning or active learning as in figure 15 shown above. This type of learning encourages team work and enables learners to present their skills. Students of GDC were so happy to come up with products made out of creativity, they were motivated and this increased their critical thinking.

Figure 16 shows participants working together in groups and every one was active participating in making a door mat using small pieces of fabric.

Participant 3: *"I did not know that even from small pieces something can be made to make money because from our village, tailors just throw the pieces because they see no use of them; now that I know am going to begin making money when I go back home."*

Participant 4: *"I will never spend money on buying door mats since I have got knowledge of making them."*

Participant 5: *"Working in group has enabled me to learn from my friends; this method does not strain because the work is divided among members in the group."*

Participant 8: *"Group learning is important because slow learners are able to move together with their fellow members who are first learners."*

10 participants: *"It is now easy to make money we shall use the same skills to earn a living when we go back home."*

(b) Use of available resources from the environment

Inadequate availability of learning resources during the teaching and learning process causes poor effectiveness in the pedagogy of GDC. Learners are not able to acquire

practical skill due to inadequate resources to be used during practice. Therefore, using materials within the environment encourages active learning among learners; the learners are able to generate resources by themselves and with the guidance of the teacher they use them for problem solving, review and discovery.

Putting this in action, improvisation enables learners to practice more hands-on activities than theory to enable them apply the learned skills and knowledge to get solutions to the defined problems. Learners used materials from the environment especially waste materials for recycling like; old clothes, polythene bags, bottle tops and plastic bottles; natural fibres like banana fibres were used to make mats. Also, natural dyes from fruits and vegetables like turmeric, red cabbage, carrots and beat roots were used for dyeing fabrics.

(c) Recycling old clothes

Recycling being the method of collecting material that would be thrown away as trash and turning them into new products, has great benefit to the community and the environment. In European countries and Africa, clothes are discarded when they are old and charity organisations in these countries resell them as second-hand clothes. Similarly in Uganda recycling of the old has become a great deal since many designers have creatively produced products out recycling that are pleasing to the public hence protecting the environment.

Therefore, in the study, reusing the old materials reduces the environmental burden because when people dump clothes, they end up in landfills which is harmful to the environment; increases the municipal budget and impacts heavily on the health of the community. According to the participants in the study, they discovered that recycling old jean trousers can help protect the environment and also help them earn a living since they will be able to get money out of it to improve on the house hold income. To emphasize this from the discussion;

Participant 16: *"If clothes are just dumped anyhow, for example in trenches, there will be blockage of the channels and this can be breeding ground for mosquitos."*

Participant 4: "*Recycling saves time and the energy by reducing the need to make materials from scratch and it also plays a role of reducing the volume of first fashion."*

Figure 17: Participants cutting an old jean trouser for dress apron

Source: Field data (July, 2022)

Reusing the fabric in making old clothes reduces on the resources to be used and the costs which would have been incurred in buying and it protects the environment as well hence improving sanitation.

Figure 18: Participant wearing a dress apron recycled from an old jean trouser

Source: Photo by Researcher (July, 2022)**.**

A toilet paper is sometimes called a toilet tissue or bathroom tissue. Apart from its known use of cleaning the anal area, participants discovered that they can make flowers in a creative way (Figure 19).

Figure 19: ***Participant showing flower made of toilet paper***

Source: Researcher (July, 2022)

(d) Extraction of natural dyes

Natural dyes like onions, red cabbage, beat root and carrots were found to do well in dyeing fabrics as an alternative in the absence of artificial dyes.

Participant 7: *"Using foods and vegetables for natural dyeing is an innovation; However these vegetables might be expensive in case one needs to buy and can also not be used when people need food. Therefore, more research should be done to identify other plants which are not traditionally used as food but can be a source of dyes."*

Figure 20: Participants preparing turmeric and cabbage for dyeing

Source: Field data photo by researcher (July, 2022)

Figure 21: Participants boiling fabric together with turmeric and cabbage for dyeing

Source: Photo by researcher July 2022

Figure 22: Cabbage and turmeric dyes

Source: photo by researcher (July 2022)

Figure 23: Participants displaying dyed fabric (cabbage and turmeric)

Figure 24: Participant wearing turmeric dyed butterfly blouse.

Source: Field data July, 2022

Participant 13: *"Since artificial dyes are expensive, I will have to use natural dyes because at home we have land for cultivation therefore I will be able to plant the vegetables to use for dyeing.*

Participant 16:

"Dyed fabrics are attractive, they look good if dyes are mixed well. Using vegetables for dyeing is economical and saves money therefore it will be easy for me to get house hold income. This skill of extracting natural dyes will also help me to train others from our community such that they drive themselves out of poverty."

(e) Use of banana fibres to make a mat

Participants were able to make use of banana fibres and fabric to make a mat. They wanted to see how it looks like mixing fabric with fibres as a way of creative learning. They worked in groups sharing ideas in order to come up with a good product. Learners discovered that using fibres alone is not a good idea because fibres when dry break so easily. Therefore they decided to cut stripes of fabric and use them as the wefts for interlace. This is illustrated below;

Figure 25: Participants making a mat using banana fibres and off cuts.

Source: Field data (July, 2022)

Figure 26: Banana fibre mat with stripes of fabrics weaved on.

Source: Field data photo by researcher (July, 2022)

4. 3 Evaluation of the implemented strategies

To evaluate the impact of the implemented strategies, it was done in two ways; learners were given chance to accomplish tasks on their own through group learning and this encouraged student- centred learning. The researcher observed students working in groups to accomplish tasks. The main duty of the researcher was to see what learners were doing and guiding them accordingly. By working in groups to accomplish tasks clearly showed that learners had mastered the subject, their confidence was built and creativity enhanced. The second was through the evaluation meeting done with stake holders who included; 2 trainers, 2 administrators and, 2 students.

This meeting raised many positive views supporting the outcome of the implemented strategies. The meeting concluded that guided/ digital learning should be included in the Training process to enable students learn on their own pace and to enhance their creativity. More still, improvisation of learning resources in GDC training was to help students explore into practical abilities and to build competence among them (Woodhouse, 2011).

Figure 27: Participants in evaluation meeting held on 28th september2022

Source: Researcher Field data (July, 2022)

CHAPTER FIVE:

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter presents information on the summary of findings of the implemented strategies, conclusions and recommendations of the study. Summary of the findings of the study is presented according the last two objectives for implementation of identified strategies and evaluation of implemented strategies.

5.1 Improvisation of Learning Resources for Garment Design and Construction Training.

Using different strategies to improvise learning resources for garment design and construction training is ideal. However changing these strategies into practical experiences is challenging. Basing on research findings and related literature, it is interesting to see students being engaged and motivated during training as they actively improvise where resources are not available to improve on their hands on skills. This is emphasised by constructivist theory of learning which puts emphasis on learners' creative engagement during studying (Vygotsky, 1978).

Basing on the findings, many positive outcomes were developed as a result of creativity through improvisation of learning resources. Active participation by using hands-on method promoted critical thinking, collaboration, communication and creativity among learners. This is clearly shown in Barkley's (2010) figure 4 where learning cannot exist unless collaboration, motivation and active learning exists. Participants in the study were seen active in group learning (figure 9).

Findings from this research showed that student- centred learning gives chance to students to discover and do for themselves as shown in figure 16. This not only developed their practical skills, but also improved their livelihood. Alabi (2013) states student-centred

learning approaches through improvisation learning resources improves teaching/ learning process. The findings further revealed that due to inadequate learning resources, teacher-centred approaches dominated yet it denies learners chance to think for themselves. This discourages learners' hands-on practice yet it's an effective practice for improving performance. Hands-on skills supports the 21st century skills which target innovation abilities through fostering participation (Craft, 2006).

The results of the study showed that improvisation encourages use of alternative materials and resources to facilitate instruction wherever there is shortage of learning resources. In situations where the resources are not available, teachers should help learners improvise for learning to take place. The research encouraged learners to work in groups since working together helps them solve problems, become critical thinkers, promote creativity and innovative (Kolb et al., 1999).

5.1.1 Recycling of the old clothes.

Through improvisation of the resources, recycling was identified as one of the strategies to solve the problem of inadequate learning resources. This is clearly indicated in fig 17 and 18 where learners recycled an old jean trouser into a dress apron. The demonstrations that were done during the study showed clearly how to implement different creative techniques which were proof of the concepts and experiments presented. More still since the method was focused on the principle of learning by doing, students' perception and skills were developed through imitation, motivation and their interests were all enhanced (Williams, 2017). Recycling was discovered as one of the ways of incorporating creativity in learning through improvising learning resources.

The study results indicated that it is important to recycle in order to protect the environment. According to the study findings, it is clearly indicated that creativity has

become part of the solutions to environmental destruction since students were able to creatively re-use old jean trouser for dress apron (figure 18). This is supported by Sandin, & Peters (2018) who assert that the more old clothes are re-used, the more the environment benefits. It is also noted that the increase in the collection of re-used clothes increases the demand for more knowledge about current handling and treatment in order to facilitate improvement in textile waste management systems (Peters 2018).

5.1.2 Making use of the available resources

Basing on the research findings, inadequate availability of learning resources led to ineffectiveness in teaching of GDC as a subject hence making the subject teacher- centred since more of the theory was taught than practical. Employing creativity by improvising resources made the learning student-centred and learners were able to improvise their own resources through creativity. For example, making a mat using banana fibres (figure 26), is a creative way which one of the learners used to help her generate money for a living. From this, learners have discovered that by using their creative skills, they are able to start businesses even without capital by using what is available.

5.2 Findings from the evaluation meeting researcher conducted with stakeholders.

While in the meeting, one of the trainers observed that learning resources are inadequate and they are expensive in case they are to be purchased. There is need to improvise to make them available in order to promote hands on skills among learners. Therefore incorporating creativity in learning is very vital in teaching and learning of GDC. Furthermore, a trainer for agriculture mentioned that creativity should not only be employed in tailoring, but also in other areas like in farming. He adds that small jerry cans, plastic bottles and tins can as well be used for recycling to plant cabbage, onions, tomatoes etc. This is usually done by people living in urban areas where space is small for cultivation. He adds that food remains can be used as compost to get manure for plants to grow well since

chemicals are not good to be used because they have side effect on humans and the soil as well.

Furthermore during the evaluation meeting it was discovered educational tours or field trips motivate and encourage learners to learn more from others in different places in order to get new knowledge about the subject. One of the administrators during the meeting said that, field trips helps learners be more creative and innovative since they can apply the new knowledge acquired from visited areas and relate it with what they knew already to come up with good products. He adds that these educational tours help learners to collaborate with their friends to explore new environments, develop trust and empathy, and make connections. Therefore students get chance to apply skills by working in the real- world projects with people from different backgrounds.

Creativity through improvisation of learning resources helps teachers to discover, illustrate and demonstrate for learners. By doing this, they are helping learners to know how to train others which will help them when they go back to their communities hence making money for a living. Furthermore employing creativity in learning helps teachers improvise where resources are scarce. That is, when there is no money to purchase resources, the teacher should always have a second plan. Also this improves on learners' critical thinking by generating resources for themselves with guidance from their teacher.

5.2.2 Group learning

Group learning helped slow learners to pick the concepts from their friends in the same group. It also helped minimize repetition by trainers since students were able to learn together under the guidance of the trainer. From the discussion, one of the participants noted that group learning reduces the amount of materials that needs to be used during the learning process. He adds this kind of learning encourages learners, improves learning and builds

confidence among learners. This is in line with Act & Ndon (2007) who asserts that in the collaborative learning classroom the teacher provides good environment for learners to work together in groups in order to solve their own problems.

5.2.3 Boosting learners' creativity

When learners get exposure through educational trips, their minds are opened up to think outside the box. This helps them to learn more from what others are doing, explore and interact as a way of getting new knowledge. These trips will help students learn and discover without the help of the teacher and their communication skills are improved for example; they are able to listen, ask questions and share knowledge. Therefore these field excursions help to enhance learners' creativity and they are exposed to real- life situations and contexts and improve on their level of knowledge and understanding of subjects (Mahgoub & Alawad, 2014). Basing on this field trips should be incorporated in teaching and learning because it gives opportunity for learners to obtain information for themselves and use their senses to touch (Ali et al., 2019).

Online learning allowed students interact while doing research on various things which they were not familiar with. Students were able to watch video tutorials using internet which enabled them get information on quilting, patchwork and applique. The information obtained allowed students get engaged and work in groups to make products like patched bed cover, tote bag with printed applique, and a patched skirt. Therefore online learning should be incorporated in teaching and learning since it promotes critical thinking among learners. Similarly to that, the director of studies KFDC during the evaluation meeting commented that he was hesitant having internet in his home but when he decided to connect it, he found when his daughter had taught herself how to do animation. This is supported by Telebian et al (2014) who asserts that online learning helps students explore new knowledge and encourages interaction, engagement and promotes student centred learning.

5.2.4 Creative practical learning versus theoretical learning

Shortage of learning resources limit learners' chances of accomplishing practical skills. The creative learning environment allowed both teachers and learners improvise learning resources during the study and learners were able to think for themselves and practice alone with guidance of their teacher. This promoted hands on skills training which is student centred and it is practical based learning. This type of learning solved the problem of teacher centred learning which emphasises more of the theory than practice and it is lecture based. Trainers and administrators of KFDC during the evaluation meeting observed that improvisation of learning resources improved students' knowledge, skills and competence in generating resources where they are not available.

5.3 Conclusion

When learning resources are not available improvisation in form of creativity is applied to obtain them. The reason for this is to improve the teaching and learning methods relying more on practice than theory. Shortage of learning resources can have multiple effects on learners since they will have no confidence in hands- on activities. Improvisation of learning resources aids availability thus improving the garment design and construction training as content is made easy to comprehend and relate with. When learning resources are improvised, it will boost learners' creativity and critical thinking. In summary, the study promoted students to be critical thinkers, collaboration, group learning, engaged learning and student-centred learning.

5.4 Recommendations

The study recommends that;

Teachers should help learners improvise learning resources to help them be creative and innovative in order to enhance their creativity. Furthermore, student- centred learning should

be emphasised to help learners be engaged in group learning. This gives them chance to be critical thinkers.

Educational trips should be embraced which will enrich learners with hands-on, real world experiences, quality education, positive attitudes and motivation in practical skills. This improves socialisation among students and will help teachers embrace other learning strategies such as cooperative learning.

Vocational institutions should allocate enough time for practical lessons to help students explore more on the new concepts and to practice hands-on skills during the teaching learning process.

The government should provide funds to help train teachers pedagogical approaches. This will help institutions employ competent teachers who will provide hands-on skills to learners.

Teachers should incorporate entrepreneurship skills during teaching and learning to help students cost and sell their finished products. This should be done by using website (internet) to create awareness for of produced products and also through exhibitions and fashion shows.

5.5. Areas for further research

There should be research on plants which are not traditionally used as food but can be a source of dye.

Collaboration and engagement of employers in the development, training and delivery of skills training.

REFERENCES

Act and Ndon. (2007). Thr role of sonstructive learning, theory and collaborative. Page 253.

Ader. (2008). Rsearch design. *The contribution of human factor*, Page 4.

Alabi. (2013). Needed Competences and Strategies for Improving Teaching of Home Economics Education in Kaduna State. *Jornal of Education and Social Research ,,* 49-54.

Alabi, F. (2013). Needed Comptencies and Strategies for Improving Teaching of Home Economics Education in Kaduna State. *Journal of Educational and Social Research*.

Ali et al. (2019). Investigating the impact of Field Trips on Secondary School Students' Attitude to Learning of Sciences. *Global Social Sciences Review*, 93-98.

Amabile, T. M. (2012). Componential theory of creativity. *Working paper 120--096*, Page 5.

Anindo, J. (2016). Training Equipment and Acqusition of Employable Skills by Trainees in Public Technical and Vocational Education and Training Institutions in Nairobi County- Kenya.

Arkourful and Abaidool . (2015). The role of e-learning advantages and disadvantages of its adoption in higher education. *International journal of instruction technology and distance learning*, 29-42.

Arthur, I. (2005). Availability of Instructional Materials in Teaching of Home Economics in Colleges of Education and its Implications for Home Economics Education in 21st Century. *The Nigerian Academic Forum*, 125-130.

Audu, R., Abdulkadri, M., & Abdul, B. (2013-04). Technical Vocational Education and Training Institutions and Industries Parternership: Necessity for Graduates Skills Acquisition.

Awolaju. (2016). Instructional Materials as Collerates of Students Academic Perfomance in Biology in Senior Secondary. *Journal for Information and Education Technology*, 705-708.

Bartol, & Silvastava. (2002). Encouraging Knowledge Sharing: The Role of Organisational Reward Systems. *Journal of Leardership & Organisational Studies*, 64-76.

Bbaale, I. M. (2019). Technical Vocational Education and Training(TVET) in Uganda: Critical Analysis. *Development Policy review.*

Becker. (2013). A new Meta- model of Student Engagement: The Roles of Student Motivation and Active Learning. *Conference Paper.* Dublin.

Bell, S. (2010). Project based learning for the future. The clearing house. *A journal of educational strategies, issues and ideas*, 39-43.

Biasutti. (2017). Teaching Improvisation Through Processes. Applications in Music Education and Implications for General Education. *Frontier's in Pshychology*.

Bloor and woods. (2006). Key words in qualitative methods. *A vocabulary of research concepts*, Page 14.

Bowen, D.H. (2014). Education value of field trips. . *Education next, 14 (1).Retrieved from The educational value of field trips*, 78-86.

Brown, J. (2008). Student Centred Instruction Involving Students in their own Education. *Music Educators Journal*, 94(5).

Bucher et al. (1997). The result of direct and indirect treatment comparisons in meta-analysis of randomized controlled trials. *Journal of clinical epidemiology*, 683-691.

Burgh, G. (2014). *Encyclopedia of Educational Theory and Philosophy. Creative and Lateral Thinking: Edward de Bono.* Thousand Oaks: SAGE Publications, inc.

Burke. (2011). How to use Groups effectively. *The Journaal of effective teaching*, 87-95.

Bybee et al. (2006). The BSCS Instructional Model: Origins, Effectiveness, and Application. *Origins of Contemporary Instructional Models*.

Cai, M. F. (2020). How does a Creative Learning Environment Foster Student Creativity? An Examination on Multiple explanatory Mechanisms. *Current Psychology*.

CEDFOP. (2011). *Benefits of Vocational Education and Training.* European Union: Luxembourg.

Collins and Hussey. (2001). Exploring the Relevance of Appropriate Training in Digital Education for Women's Employment in Saudi Arabia. *A Practical Guide for Undergraduate and Postgraduate Students. Polgrave Macmillan.*, Page 15.

Craft. (2006). *Progrssion in creative learning, Pilot final report.* The open University: Milton Kaynes.

Creswell. (2009). *Action Research Methods.* London: SAGE Publications.

D, Y. L. (2022). Using Emerging Technologies to Promote Creativity in Education: A Systematic Review. *International Journal of Educational Research Open*.

Das, M. (2022). Origin and History of Clothing. *When did we start wearing clothes?*, Page 1.

Deaja Sanders, A. G. (2021). A Review of Clothing Microbiology: The History of Clothing and the Role of Microbes in Textiles. *The Royal Society Publishing*, 2.

Descombe. (2005). Research Ethics and the Governance of Reseach Projects: The Potential of Internet Home Page. *Socialogical Research Online*.

Dick. (2001). Making the most emergent methodologies. *A critical choice in qualitative research design*, Page 7.

Dorgu, T.E. (2015). Different teaching methods, a panacea for effective curriculum implementation in the classroom. *International journal of secondary education*, 77-87.

Driscoll, J. (2006). Supported reflective learning: the essence of clinical supervision? *Reflective practice and guided discovery*, Page 3.

Driscolle, P.M. (2000). *Psychology of learning for instruction.* Massachusetts: Allyn and Bacon.

Duran, L. B. (2004). The 5E Instructional Model: A Learning Cycle Approach for Inquiry-Based Science Teaching. *The Science Education Review*, Page 4.

EDUCAUSE. (2015). *Expectations for the Next Generation Digital Learning Environment.* Learning in initiative.

Eicker et al. (2017). Vocational Education and Training in Subsaharan Africa: Current Situation and Development.

Emafa, A. J. (2015). Improving the Skill Component of Students inSecond Cycle Institutions in Ghana and its effect on the Polytechnic Fashio Student. *Journal of Education and Practice*.

Ernest. (1999). social constructivism as a phylosophy of mathematics. *Radical constructivism*.

Esmail et al. (2018). The Role of Clothing in Participation of Persons with a Physical Disability: A Scoping Review Protocol. *National Centre for Biotechnology Information*.

Frideheid Eicker, G. H. (2017). *Vocational Education and Training in Sub- Saharan Africa- Current Situation and Development.* W. Bertelsmann Verlag GmbH & C.o. KG. ISBN 978-3-7639-5793-4.

Golafshani. (2003). Understanding Reliability and Validity in Qualitative Research. *The Qualitative Report*, 598-604.

Gray. (1997). Constructivist teaching and learning SSTA Research Centre Report. 97-107.

Gray, A. (1992). Constructivist Teaching and Learning. *Power and Control in the Constructivist Classroom are Shared*, Page 10.

Hartman, H. (2002). Developing Students' Metacognitive Knowedge and Skills. *Cognitive psychology for teacher education*, Page 2.

Huang. (2021). Comparision and Contrast of Piaget and Vygotsky's Theories. *Proceedings of the 7th International Conference on Humanities and Social Science Research (ICHSSR)* (pp. 28-30). Shanghai, China: Atlantis press.

Huang, Y. C. (2021). Comparison and contrast of Piaget and Vygostsky's theories. *Social theory of cognitive development*, 1- 3.

Jammie, L. K. (2019). *Application of Creative Thinking Skills (CTS) in STEAM-based Activities in a Hong Kong School: Instrument adopted, Attitudes changed and Principles derived.* Hongkong: ProQuest LLC, 2020.

Janice S Tripney et al. (2013). Technical and Vocational Education and Training (TVET) for Young People in Low- and Middle- Income and Meta- Analysis. *Emperical Research for Vocational Education and Training*, 1-14.

Jegede, S.A. (2010). Nigerian student perception of technical words of senior secondary, school of Chemistry Curriculum. Pakistan. *Journal of Social Sciences*, 109-1111.

Joana et al. (2015). Improving the Skills Component of Clothing and Textiles Amomng Students in Secondary Cycle Institutions in Ghana and its Effect on the Polytechnique Fashion Stuent. A Case of Ola Girls, Mawuko Girls and Mauli Senior High School in Ho, Ghana. *Journal of Education and Practice*, 20-30.

John, D. (2006). Toward Social Constructivism in Pre service Education. *Education is not an affair of telling and being told but an active and constructive process.*, Pages 3.

Jungk & Mullert. (1987). How to Create Desirable Futures. In R. Jungk, & N. Mullert, *How to Create Desirable Futures.* London: Institute for Social Inventions.

Kapur, R. (2018). The significance of Social constructivism in Education.https://www.research. organet/publication/323825342. *The significanceof social constructivism in Education*, Page 2.

Kelly, J. (2012). Learning theories. *The Peak performance center.com/Educational earning/learning theories*, Page 4.

Kemevor(Phd), M. A.-W. (May 2018). Teaching and Learning Creativity in Fashion. A case of study of Fashion Department of Takoradi Technical University. *British Journal of Psychology Research*, Vol.6 No.1, pp 1-21.

Kemmis & Taggart. (1982). The theory of Knowledge-constitutive interest. *Exploring the relevance of critical theory*, 92.

Kim. (2021). An Analysis of Uganda Vocational Education: Assessing Human Capity and Human Devlopment Approaches. *Issues in Education Research*, 1-5.

Kolb et al. (1999). Experiential Learning Theory Previous Research and New Directions. Page 10.

Komolafe, F. (2016). Reignforcing Psychomotor Skill of Clothing and Textile Teachers in Nigerian Secondary School. *Multidisplinary Journal of Research Development*.

Kompf. (1996). CONSTRUCTIVIST TEACHING: INTERACTIVE, COLLABORATIVE, INTEGRATIVE, AND INQUIRY-BASED. *ONSTRUCTIVIST TEACHING: INTERACTIVE, COLLABORATIVE, INTEGRATIVE, AND INQUIRY-BASED*, Page 2.

Kreysing, M. (2001). Vocational Education in the United States: reforms and results. . *European Journal*, 27-35.

Lewis, L. J. (1952). *Phelps-Stokes Report on Education in Africa.* London: New york, Oxford University Press.

Looney, C. a. (2021). Nurturing Creativity: Louisiana Second Grade Teachers' Perspectives and Practices . *OUTSTANDING GRADUATE RESEARCH PAPER AWARD*, Page 8.

Lucas et al. (2012). *How to Teach Vocational Education: A Theory of Vocational Pedagogy.* University of Winchester: City & Guilds.

Lucas, B. (2014). Vocational Pedagogy: What it is and Why it matters . *London: 157 Group*.

Lucas, e. a. (2012, December). How to Teach Vocational Education. *Pedagogy for a changing world*.

Luis et al. (2018). Measuring Actual Learning Versus Feeling of Learning in Response to Being Active Engaged in Classroom. 1-6.

Machemer, P. a. (2007). Students Perception of active Learning in a Large Cross- Dsplinary Classroom. *Active Learning in Higher Education*, 8:1.

Mahgoub, Y.M. (2014). The impact of field trips on students creative thinking and practices in Arts education. *Journal of American Science*, 46-50.

Majid, H. (2017). The Use of Scaffolding Technique Via Facebook in Improving Descriptive Writing Among ESL Learners. *The Southeast Asian Journal of English Language Studies.*, 77-88.

Marc et al. (2014). A Review of Research on School Trips and Their Value in Education. *International Journal of Environment & Science Education*, 236-243.

Marc et al. (2014). A Review of Research on School Trips and Their Value in Education. *International Journal of Environment & Science Education*, 236-243.

Matheson, D. (2015). *An Introduction to the Study of Education: Theories of Learning:, Constructivist Model of Learning.*

McCarthy, J. (2015). Student-Centered Learning: It Starts With the Teacher. *Persoanlized learning*, Page 5.

MoES. (2011). *Skilling Uganda.* Uganda: BTVET.

Mouzakitis, G. S. (2010). The Role Vocational education and training currricula in economic development. *Procedia Social and Behavioural Sciences 2(2010) 3914- 3920*.

Mouzakitis, S. G. (2010). The role of Vocational Education and Training Curricula in Economic Development. *Procedia Social and Behavioural Sciences*.

Mupa & Isaac. (2010). Factors Contributing to Ineffective Teaching and Learning in Primary Schools: Why are Schools in Decadance? *Journal of Education and Practice*, 128.

Mupfumira, I. (2011). The Hands-on Approach in Teaching and Learning of Home Economics in Primary School. *International Journal of Education.*

Mvududu & Burges. (2012). Constructivism in practice:The case of English Language Learners. *International Journal of Education*, Page 108-118.

Myers & Jones. (2019). Investigating the Impact of Field Trips on Secondary School Students' Attitude to Learning of Science. *Global Social Science Review*, 93-98.

Nichelle et al. (2013). *Methodology Brief; Introduction to Focus Groups.* Centre for Assessment, Planning and Accountability.

Nigel et al. (2002). Using Interviews in a Research Project. *Trent Focus for Research and Development in Primary Health Care*.

Nigel Mathers, N. (2002). *Using Interviews in a Research Project.* London: Sheffield.

Njenga, M. (2022). Professional Competencies and Development Needs of TVET Teachers in Kenya. *Hungarian Education Journal*.

Nwosu, J. C. (2017). Technical and Vocational Education and Training as a Tool for National Development. *International Journal of Social Sciences and Humanities Invention 4(9): 3983- 3988.*

Obinnim, E. (2018). The Impact of Competency Models on TVET Instructors in Apparel Pattern Making. *Journal of Arts, Science & Commerce.*

Obinnim, E. (2018). The Impact of Competency Models on TVET Instructors in Apparel Pattern Making Process in Ghana: A Qualitative Study. *Journal of Arts, Science & Commerce*.

Okumu, I. M., & Bbaale, E. (2018). Technical and Vocational Education and Training in Uganda: A Critical Analysis. *Development Policy Review*.

Olema, V. (November,2018). Contradictions and Complexities to Vocational Education and Training:A case of Uganda. *Peace Engineering Conference.* New Mexico: America: Albuquerque.

Omwirhiren E.M. (2015). Enhancing academic achievement and retention in senior secondaryschool chemistry through discussion and lecture methods: a case study of some selected secondary schools in Aboko, Benue state Nigeria. *Journal of Education and practice*, 155-161.

Oteles, U. (2020). A Study on The Efficiency of Using 5e Learning Model in Social Studies Teaching. *International on-line Journal of Educational Science*, 112.

Owoko. (2009). The role of advocacy in enhancing equalization of opportunities for disabled people. *Unpublished paper presented in Leonard Cheshire Disability workshop Kisumu*, Page 3.

P, T. (ancient word). "Ancient World: History of Dress." Love To Know,Love To Know Corp, fashion. *Clothing- history/ ancient- world-history-dress.*

Paryono. (2017). The Importance of TVET and its Contribution to Sustainable Development. *AIP Conference Proceedings* (pp. 1-10). Indonesia: AIP Publishing.

Patton, M. Q. (2015). *Qualitative Research and Evaluation Methods (fourth Ed. ed).* . Thousand Oaks Carlifonia: SAGE Publications, Inc.

Paul & Juliet. (2018). International conference on Multidisciplinary research. *Instructional resources and teacher effectiveness in Government* .

Peters, S. &. (2018). Environmental Impact of Textile Reuse and Recycling- A Review. *Journal of Cleaner Production*, 353-363.

Phelps- Stokes, C. (2015). *The Impact of the Phelps- Stokes Commission on Education Develpment in Nigeria.* United States of America: Phelps- Stokes Commission on Education Development.

Qigui, F. (2017). Flipped Classroom and Micro-course Making Technology:Beijing. *Learning Behavior in the Flipped Classroom*, Page 7.

Rachel et al. (2015). Effect of Availability of Teaching Learning Resources on the Implementation of Inclusive Education in Pre- School Centres Nyamira Sub- County. *Journal of Education and Practice*.

Ren & Felder. (2015). Application of Constructivist Theory in Flipped Classroom. *Take College English Teaching as a Case Study*, Page 4.

Rodriguez & Shelly. (2019). Making and the 5E Learning Cycle. *Maker Education*, 55.

Roth. (2000). *Anthentic school science:Intellectual traditions, learning and knowledge.* London: MK Chapman publishing.

s. Gupta. (2011). Constructivism as a paradigm for teachnin and learning. *Internationall journal of physical and social sciences*, Page 10.

Sain et al. (2022). Sustainable Development Goal for Quality Education (SDG4): A Study on SDG 4 to Extract the Pattern of Association Among the Indicators of SDG 4 Employing a Genetic Algorithm. *Education and Information Technologies.*, 1-20.

Sanders et al. (2021). A Review of Clothing microbiology: The History of Clothing and the Role of microbes in Textiles. *National Centre for Biotechnology Information*, 1-10.

Sandin, & Peters. (2018). Environment Impact of Textile Reuse and Recycling- A Review. *Journal of Cleaner Production*, 353- 365.

Scott, C. L. (2015, sebtember 13). The Features of Learning1: . *Why must Learning Content and Methods Change in the 21st Century?*

Scott, C. L. (2015). The Futures of Learning 3: What Kind of Pedagodies for the 21st Century? *UNESC Education Research and Foresight*.

Shakil et al. (2011). The Need and Importance of Field Trips at Higher Level in Karachi, Pakistan. *International Journal of Academic Research in Business*.

Sharma, H. L. (2015). Enhancing Students Interest English Language Via Multimedia Presentation. *International Journal of Applied Research.*, 277.

Sion Field, K. H. (2009). *Learning for Jobs.* Paris: OECD.

Sivakumar, D. R. (2016). Effective uses of Field Trips in Educational Programming. *Glokalde is Official e-journal of Udeeewana*, 22.

Stephen et al. (2013). The Influence of Instructional Materials on Academic Performance of Senior Secondary School Studens in Chemistry in Cross River State. *Global Journal of Education Research*, 39-42.

Stuyf, R. R. (2002). Scaffolding as a Teaching Strategy. *Adolescent Learning and Development*.

Tang, G. P. (2019). International Experience in TVET- industry Cooperation Chinas poorest province. *International Journal of Training Research*, 131-143.

Telebian et al. (2014). Infromation and Communication Technology (ICT) in higher education advantages, disadvantages, conviniences and limitations of applying e-learning to agricultural students in Iran. *Procedia-Social and behavioural sciences*, 300-305.

Trebian, P. F. (Aug 11 2019). Technology and Learning in the New Information Age. *Journal of American Indian Higher Education*.

Tuner. (2010). Qualitative Interview Design: A Practical Guide for Novice Investigators. *The Qualitative Report*, 754-760.

Unal, Ç. (2017). Using videos and 3D animation for conceptual learning in Basic computer units. *Contermporay Educational Technology*, Page 393.

UNESCO. (2014). *Sub-Education Policy Review report (TVET).* Bangkok: University Network.

Vgostky. (1978). *Mind in society knowledge.* Cambridge: Havard University Press.

Vijay, P. G. (2017). *Technical and V ocational Education and Training (TVET) system in India for Sustainable Development. Centre for Innovations.* Retrieved from www.educationinnovations.org.

Weigel, T. (2007). The Concept of Competence in the Development of Vocational Education and Training. *Journal of Vocational Education and Training*, 3-6.

Weng et al. (2022). Promoting Student Ceativity and Entreneurship Through Real- World Problem- Based Maker Education . *Thinking Skills and Creativity*.

Westwood, P. (2004). *What teachers need to know about teaching methods. Concepts to classroom reviewed online.* Camberwell: Vici Acer Press Wnet Education.

Appendices

Appendix 1: Introduction Letter

KYAMBOGO UNIVERSITY

P. O. Box 1 Kyambogo, Phone: 041-285001/2 Fax: 041-220464
www.kyambogo.ac.ug
SCHOOL OF ART AND INDUSTRIAL DESIGN
DEPARTMENT OF VISUAL COMMUNICATION
Masters in Vocational Pedagogy Programme

20th/02/2022

TO THE DIRECTOR OF OPERATIONS
AMIGOS UGANDA (KFDC).

Dear Sir/Madam,

RE: INTRODUCTION OF NAMIREMBE LYDIA NSUBUGA

This comes to introduce to you NAMIREMBE LYDIA NSUBUGA ..... A student of Masters in Vocational Pedagogy (MVP) Programme at Kyambogo University.

This student bears registration **no**. 19/U/GMVP/19019/PD ..... and in his/her final year.

In partial fulfillment for the ward of MVP Programme of Kyambogo University, This student is expected to conduct a future workshop at his workplace.

The purpose of this letter therefore, is to request you to allow NAMIREMBE LYDIA NSUBUGA ..... conduct his/her Research at KIRA FARM DEVELOPMENT CENTRE .....and accord him/her the necessary support for his/her study.

Looking forward to your usual support.

Yours Sincerely,

PP Dr.Nabaggala Justine
Head of Department, Visual Communication

Appendix 2

CONSENT FORM

KYAMBOGO UNIVERSITY
P.O BOX 1 KYAMBOGO
DEPARTMENT OF ART AND INDUSTRIAL DESIGN

CONSENT FORM FOR ALL PARTICIPANTS

Dear Mr/Mrs.....

Enhancing Learners Creativity by Generating Learning Resources for Garment Design and Construction Students (GDC) at Kira Farm Development Centre (KFDC) is my study topic.

You are humbly requested to take a few minutes and respond to this questionnaire which aims at Enhancing Learners Creativity by generating Learning Resources for GDC students at KFDC.

I have obtained permision to undertake this study from the National Council for Science and Technology having been initially approved by the University and here I present an introduction letter from Kyambogo University where I am a student. The principal investigator of this study is a researcher who is a Masters student doing Masters inVocational Pedagogy of Kyambogo Univerversity.

Your participation in this study is purely voluntary and you have the right to withdraw anytime or decline at any time with out any coersion from the study. The information obtained from you about the family/self or the child will strictly be kept cofidential and your name will not appear any where to the public. All data will be private to the principal investigator for study purposes only.

There are no special benefits but it is hoped that the results will help to improve the quality of training the learners at KFDC. No risks are invisaged to result from this study except.

Meetings will be held at your institution to disseminate the findings from the study. The results will also be published in the academic papers; hopefully in peer reviewed journals.

If there arises a question/ concern/comment about the study, the following contacts are useful to reach: Lydia Namirembe Tel.no.0772884488 Email: lydianamirembe46@gmail.com ; Dr. Grace Muhoozi (supervisor), Tel. No, 0772487890/ 0702487890; Email: gmuhoozi15@gmail.com

Statement of consent/assent:

I agree to participate in this study willingly yes(✓) No( ) *Tick appropriately*

Name....Ssesazi Godwin.... Signature/thumb print.....

Date.....12/July/2022.....

Witness.....Ssesazi Godwin..... Signature/thumb print

Date .....12/July/2022.....

Lydia Namirembe, a student of Kyambogo UniversityDepartment of Art and Industrial Design
Kyambogo university.

THANK YOU!

APPENDIX 3: INTERVIEW GUIDE FOR LEARNERS

Dear respondent, I am a University student carrying out research on "Enhancing learners' Creativity in Generating Resources in garment design and construction (GDC)." You have been selected to participate in this study. Results will only be used for academic purposes.

Thank you.

Instructions: Please fill answers in the space provided below;

1. What challenges do you face during the teaching and learning of garment design and construction?

   ……

   ……

   …….

2. Mention the different methods used during teaching and learning of garment design and construction?

   …….

   …….

3. How have you overcome the problem of shortage of learning resources during the teaching and learning of GDC?

   ……

   ……

4. What are the possible solutions to the challenges identified in (1) above?

   ……

   ……

   ……

   ……

APPENDIX 4: QUESTIONNAIRE FOR TRAINERS

Dear respondent, I am a University student carrying out research on "Enhancing Learners' Creativity in Generating Learning Resources." You have been selected to participate in this study. Results will only be used for academic purposes.

Thank you.

Instruction: Use the space provided to answer the questions below;

1. What challenges do you face during teaching garment design and construction?

   ……

   ……

   ……

   ……

   ……

2. What methods of teaching do you use while conducting the lesson?

   ……

   ……

   ……

   3a. Do you get enough learning resources to train GDC?

   b. If no, what measures have you put in place to help learners generate learning resources?

   ……

   ……

   ……

   ……

3 What are your expectations from learners by the end of the study?

……

……

4 Have you helped learners to incorporate business ideas in the course?

Yes /NO……

5 If yes, briefly explain how?

……

……

6 How do you assess learners?

……

APPENDIX 5: FOCUS GROUP DISCUSSION GUIDE FOR STUDENTS, TRAINERS AND ADMNISTRATORS

1. How has the study benefited the learners, trainers as well as administration?
2. Why do you think recycling is important?
3. What do you expect from learners after the study?
4. How has the study improved GDC subject?
5. How has the study improved learners' creativity through generating resources in teaching and learning GDC?
6. Why do you think group learning is important?
7. What is the importance of study tours in teaching and learning?
8. Why would online learning be incorporated in teaching and learning?

APPENDIX 6: WORK PLAN

Activity	Start	End	Person responsible/Comment
Situation analysis	January	February	Researcher/Successful
Future workshop	March	April	Researcher/Successful
Follow up planning	May	June	Researcher/Successful
Implementation	July	September	Researcher/Successful
Evaluation	September	September	Researcher/Successful
Final review	October	October	Researcher/Successful
Handing in final report	October	October	Researcher/Successful

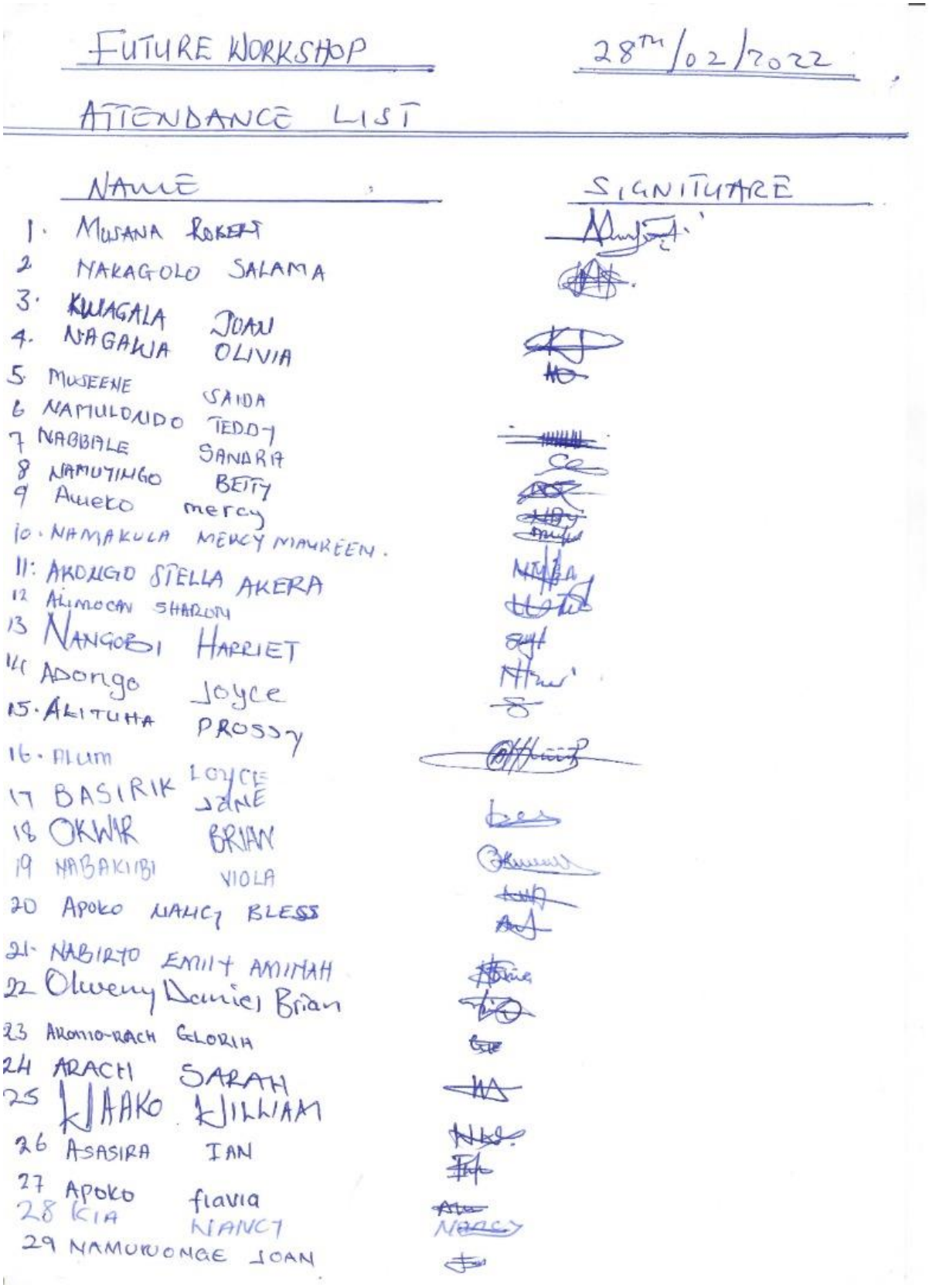
APPENDIX 7: FUTURE WORKSHOP GUIDE

1. Preparation phase: This was done on the 28th/02/2022 at KFDC informed participants, stationary, refreshments provided.
2. Critique phase: Stake holders generate ideas while observing the rule of thumb - first idea generation, respect for every one idea, short responses, no criticism
3. Utopia/ fantasy phase: Turning all the negative ideas in the Critique phase into positive, assuming every situation to be possible, resources available to fix every problem
4. Reality phase: This is the ideal situation, stakeholders point workable solutions within the available resources, subjected the pressing issues to pair wise matrix ranking to get the most pressing challenge.
5. Action implementation of the agreed strategies
6. Follow up the impact of the implemented activities.

APPENDIX 8: OBSERVATION CHECKLIST

Activity	**Idea generation**	**Process**	**Participation/ collaboration**	**Duration**	**Checking results**	**Finishing**
Patch work	Cutting and joining small pieces to make a bed cover	Cutting a template for patch pieces	Group learning. Learners actively involved	2 weeks	Achieved	Done, good work
Quilting	Using a quilting sponge together with stitched patch work piece	Stitching 3 quilt layers	Students engaged in learning	2weeks	Achieved	Good
Applique	Attaching pieces on to the main fabric	Stitching applique design on a tote bag	Attentive observing and practicing	1 week	Achieved	Good
Recycling	Recycling old jean trouser	Cutting and stitching a dress apron	Active	I week	Achieved	Good
Use of available resource	Collecting banana fiber to make a mat	Cutting stripes of fabric to interlace with fibers	Engaged	2weeks	Achieved	
Extraction of natural dyes	Use of turmeric and cabbage for dyeing fabrics	Pounding and boiling the dyes	Student centered-learning	1week	Achieved	Good
Activity	**Idea generation**	**Process**	**Participation/ collaboration**	**Duration**	**Checking results**	**Finishing**

APPENDIX 9: ATTENDANCE LIST FOR FUTURE WORKSHOP



FUTURE WORKSHOP 28TH/02/2022

ATTENDANCE LIST

	NAME	SIGNITHARE
1.	MUSANA ROBERT	
2	NAKAGOLO SALAMA	
3.	KWAGALA JOAN	
4.	NAGAWA OLIVIA	
5	MUSEENE SAIDA	
6	NAMULDADO TEDDY	
7	NABBALE SANARA	
8	NAMUYINGO BETTY	
9	Aweko mercy	
10.	NAMAKULA MERCY MAUREEN.	
11:	AKONGO STELLA AKERA	
12	Akimocan SHARON	
13	NANGOBI HARRIET	
14	Adongo Joyce	
15.	AKITUHA PROSSY	
16.	Akum	
17	BASIRIK LOYCE JANE	
18	OKWAR BRIAN	
19	NABAKIBI VIOLA	
20	Apoko NANCY BLESS	
21.	NABIRYO EMILY AMINAH	
22	Oweny Daniel Brian	
23	Akonio-Rach GLORIA	
24	ARACH SARAH	
25	KIAKO WILLIAM	
26	ASASIRA IAN	
27	Apoko flavia	
28	KIA NANCY	
29	NAMUWONGE JOAN	

Appendix 10

FUTURE WORK SHOP

ATTENDANCE LIST - TRAINERS / ADMINISTRATORS

#	NAME		TEL NO	SIGNATURE
1	VINCENT	ANGGUYO	0788099178	
2.	Joshua	Kizito	0782116526	
3.	OCIRA	JUSTINE	0781606246	
4:	Tihaise	Ulian	0785133611	
5	Peoputa	~~Feo~~ Hakiganda	0701704989	
6.	Nakirijja	Matilda	0781758030	
7.	Björn	Borowski	+256 15226358794	B Borowski
8	Isaiah	Lubwama	0704267999	
9	Lutakome	Alex	0704535757	
10	Ssekalembe	William	0788408074	
11	Yiga	Anthony	0701678230	
12	BAKKO	OLIVIA	0756754394	
13	Joshua	Nsereko	0778405162	
14.	Ssabiiti	Joseph	0772499933	
15	Ssanyo	Catherine	0781790777	